

SL-11 MC-581/1

Time: 07:05 CDT, 13:12:05 GMT
6/6/73

PAO This is Skylab Control; 12:05 Greenwich mean time. Fifty seconds from acquisition of the first Hawaii Tracking Station pass this morning. If no air-to-ground conversation takes place during the Hawaii pass, there is only a brief gap between Hawaii and Goldstone - less than 3 minutes. Therefore, we'll leave the line up across the States. And the start of today's activities involving preparations and a simulation - inflight simulation of the EVA tomorrow to free the solar array panel. Standing by for Hawaii stateside pass; at 12:06, this is Skylab Control.

PAO Lost of signal, Hawaii; acquisition of signal, Goldstone in 2 minutes. Continuing to stand by for upcoming stateside pass, end of revolution 329 and start of revolution of 330, Skylab Control standing by.

END OF TAPE

SL-II MC583/1

Time: 07:25 CDT, 13:12:25 GMT

6/6/73

CC Skylab, Houston. We're AOS at Bermuda for the next 7 minutes. Be advised we're not going to do any more unattended (garble) daylight cycles; so we're putting the bird back in solar inertial mode. We are also closing the fine sensor - Sun sensor doors these normal operations. Also be advised that SCAN SPEC light was caused by some high voltage trip-offs in S055. We've been working that problem just for about the last hour or so, and we'd like to look at the data before we work it - before we turn it on again. So on any ATM operations from here, do not operate S055 until further notice, and we'll let you know how our data looking goes.

SC

Okay.

CC

Skylab, Houston. We're going to be LOS in about 1 minute. We're going to see you at Canary at 12:36, just a couple of minutes dropout.

SC

Okay.

END OF TAPE

SL-II MC-584/1

Time: 07:35 CDT, 13:12:35 GMT
6/6/73

CC Skylab, Houston. We're back at Canary;
got you for 9 minutes.

SC Read you, (garble).

CC And Skylab, Houston. A couple of more
things; the ENCO just reported a few secon - a few minutes
ago that he's got a low paper indication on the teleprinter.
So sometime today, if one of you guys get a chance, we'd
appreciate if you'd change the roll of paper. Also, I've
got a solar activity update that I ought to pass on to the
CDR sometime before he does his ATM pass this morning, assum-
ing that you do get squared away up there in time for him
to do that pass.

SC Okay. Give it to me then.

CC Stand by just a second.

CC Roger. I'll give you the solar activity
in just a second, Joe. Be advised we're also now configuring
the rate gyros in our normal two gyros up per axis, and this is
normal commanding at the start of the day. On the solar activity,
we've got active surge regions in SE13 and NE16, and those
active surge regions continue. Old active region 08 is due
back at SE13 at about 20:00 Zulu today. An eruptive prominence
on the limb to about 0.08 solar radii occurred at NE16 at about
07:35 this morning. And we have a possibly new developing region
at 13/0.2, and that was also a few hours ago at about 07:00. One
more advisory: active regions 24, 27, and 28 now have spots in
them.

SC Looks like an epidemic of measles is
coming on. Stand by.

SC Dick, apparently you're not using arc meters
on these things, and we were - we were agreed we were going to
use arc meter coordinates for all solar features. Would you ask
the guys to translate those into arc meters for us, please?

CC Go ahead.

SC Try (garble), 13s and the NE16s and so forth.

CC Rog. I certainly will, Joe. Stand by.

SC Thank you.

CC And Skylab; Houston. I've got the correc-
tions to that goof up we made on reading up the coordinates on
the solar activity update.

SC Okay. Let's go.

CC Okay. The active surge regions that
are still continuing are the 260 at a radius of 1.0 and at
28.0, also on the limb at 1.0. The old active region that's
due back is on the limb 260 at 1.0. And the eruptive prominence
that occurred out to the 0.08 solar radii was at 280 at 1.0.

SC Thank you very much.

CC Roger.

SL-11 NC-584/2

Time: 07:35 CDT, 13:12:35 GMT
6/6/73

CC Skylab, Houston. We're about 45 seconds
to LOS. We're going to drop out for a couple of minutes and
then have a short 2 or 3 minute pass at Ascension.
SC Okay.

END OF TAPE

SL-II MC-585/1

Time: 07:46 GDT, 13:12:46 GMT
6/6/73

CC Skylab, Houston. We're AOS at Ascension
for the next 3 minutes.

SC Roger, Houston.

CC Skylab, Houston. We're 1 minute from
LOS. We're going to see you at Honeysuckle at 13:22.

PAO This is Skylab Control. Loss of signal
through Ascension Island - very brief pass. And Carnarvon
in 28 minutes is the next station coming up, as the Skylab
Space Station crew gets geared up for the day's activities,
which include an onboard simulation in coordination with the
ground of tomorrow's EVA, to attempt to free the solar panel.
They have three solar astronomy passes today with the Apollo
telescope mount. And at 13:52 Greenwich mean time, 29 minutes
to Carnarvon, this is Skylab Control.

END OF TAPE

SL-12 NC-586/1

Time: 08:21 CDT, 13:13:21 GMT
6/6/73

FAO

This is Skylab Control; 13:21 Greenwich mean time. Fifty seconds to acquisition through Honeysuckle Creek, Australia. At the last tracking site, over Ascension, the average state of charge on the ATM batteries, 71.5 percent. One of the regulators, number 17, still a little bit under power as far as amp hours and our amps that it's carrying. We should be in acquisition now through Honeysuckle. We'll stand by for resumption of communications.

CC

Skylab, Houston. We're AOS over Honeysuckle for the next 8 minutes.

SC

Roger.

CC

And we didn't get our gyro reconfiguration complete. We were still doing X-axis; so we'll need you to stay off the DAS for a minute or so. And you might want to put your X-axis rate gyro monitor in 1 and 2, because that will be the configuration.

SC

Okay. We will when we go up there, Houston. We're eating breakfast right now.

CC

Roger.

SC

M110 is on the VTR, whenever they can strip it, Crip.

CC

Roger. Understand. You've got it on the VTR.

SC

Hey, what's going on in the world down there? Anybody got a morning paper around?

CC

I'll see if I can get some news for you. It's kind of - -

SC

We'd appreciate it. We haven't heard much in the last week.

CC

You're the guys that have got all the news going.

CC

Houston had its annual rain storm last night.

CC

Skylab, Houston. We're 1 minute to LOS. We'll have you again at Hawaii at 13:43, 13:43. No joy on the news. Everybody's getting up so early, there isn't anybody seeing the newspaper. Tell you what. We'll try to find one such that we can read you some news with your dinner tonight.

SC

Okay. How about passing it up, too, Crip. We'd kind of like to hearing some morning news. Pete's wanted the (garble) time.

CC

Rog. We tried that for a while, but the news has been so bad, or so boring, there hasn't been anything worthwhile passing up to you. I guess about the only thing going on is still Watergate and you guys.

SC

Well, keep us posted on how we're doing, will you?

SL-11 MC-586/2

Time: 08:21 CDT, 13:13:21 GMT
6/6/73

CC

Okay.

PAO

This is Skylar Control; loss of signal
from Honeysuckle. Eleven minutes to Hawaii.

END OF TAPE

SL-II MC587/1

Time: 08:32 CDT, 13:13:32 GMT
6/6/73

PAO Up coming on the video, on TV monitors in the News Room, will be a television tape lasting approximately 11 minutes of some of the simulations that have been done on the EVA procedures in the tank, the water tank at Huntsville, at Marshall Space Flight Center. We'll be back in 11 minutes for the Hawaii pass. At 13:31 Greenwich mean time, Skylab Control.

VIDEO REPLAY OF EVA SIMULATION
IN MSFC NEUTRAL BUOYANCY SIMULATOR
(AUDIO UNINTELLIGIBLE)

END OF TAPE

SL-II MC588/1

Time: 08:40 CDT, 13:13:40 GMT
6/6/73

SC (garble)
PAO This is Skylab Control; 13:41 Greenwich
mean time. Acquisition Hawaii in about 40 seconds.
SC (garble)
SC Disregard.
CC Okay.
SC Hey, Crip, disregard the disregard.
CC Roger.
SC On general message 2, one of the questions
was "Do we" - I guess question 2 of the general message.
Do we agree with the leading light 11, 12, and 13, of the
ZLV maneuver pad? I assume that that is the fine maneuver
tweet to the - back to FI (garble). Is that right?
CC Let me clarify that for you. Stand by
one.
SC Hey, Crip. If nobody's got anything else
we'll give you the real time answers to the questions.
CC Okay. That first question you did have,
that was correct. All they were talking about was the
fine tweaks for the solar inertial mode.
SC Yeah, okay. Are you ready for some
answers? You got the questions?
CC Roge. Won't you go ahead.
SC Okay, number 1, tape recorder 2 (A) about
the tape motion light. Yes, to me it did seem characteristic
of speed (garble). They kind of, as I mentioned when it
happened, flickered on and off then would go off for a while,
come back on and then stay on for a while. And off flickered
which gradually turned to on flickers, if you understand what
I mean, and it would light back on again.
CC Okay.
SC It was intermittent through the 60 (garble)
operation, as a matter of fact, did not occur during the -
the speed up part of the tape.
CC Did not occur when you speeded it up?
SC That's right. During the speed change
the light went out and it came right back on and stayed
on for a while. It was after it had been running for a while
that I noticed the light flickered.
CC Okay.
SC When I changed the tape yesterday, I
did not notice any difference between the areas for the
two passes. Number 2 on the DOP maneuver pads if (garble)
lines 11, 12, and 13 are. Yes I agree with deleting them.
CC Okay.

SL-II MC588/2

Time: 08:40 CDT, 13:13:40 GMT
6/6/73

SC If they're going to be zero forever.
Even if they're not, as long as they're at zero I think you
can leave them off.

CC Okay.

SC Number 3, that was the one time in
(garble); they never came on again.

CC Roge.

SC I don't understand the second part of
the question. It says, did the light appear during OFF.
(Garble) running a continuous mode is considered OFF, and
that's when it come on. I don't really understand it.
You got a quick clarification on that part of the question,
Crip?

CC Let's see if I can get EREF for correction -
Adam to clarify that.

SC Okay, and I only noticed it in the end
of the third part to that question. It was when I was
changing building blocks. I don't know if that mode stopped
or not. I don't recall - I didn't consciously look at the
sequence complete talkback and I'm afraid I can't tell
you what its status was.

CC Okay, but it was one time only and
it did occur when you were in the continuous mode?

SC That's right.

CC Okay.

SC Number 4. The nice thing about centering
that white light coronagraph on the TV is that it changes the
roll. So for that roll, yeah, up to (garble) right 24 was a
good number but as soon as you roll off they change.

SC I used right 20 and up 10 in a couple
of rolls.

SC Yeah, you use a different thing. If
we're going to use this technique I think the operator,
Crip, is just going to have to go and he's going to have
to tweak it up on the TV, switch back if he's still got a
ready light. I think we'll soon determine the boundary of
the ready light which are about 25 on the times 1 scale.

CC Okay, understand the changes with roll
and the boundary is about 25.

SC Yeah, that's where you can't get the ready
light anymore.

CC Understand.

SC Number 5 is - I guess we haven't been
placing a coalignment data on Channel B. I ran one yesterday
or the day before, whenever, and nothing's changed since
the first coalignment. All it amounts to is the check.

BL-11 NC588/3

Time: 08:40 CDT, 13:13:40 GMT
6/6/73

At least Pete and I. Let me check with Joe.

SC Okay, the only changes that have occurred is when the friendly expert SPT has run them and he has recorded that date on Channel B. The ones that the CDR and PLT have run are - there have been no changes, they just been checked.

SC

Okay.

SC

Okay, the last question. They're pretty simple I'll tell you what the cue cards mean is nothing but - and what we've done is we have left the EREP checklist and are using the summary time line, as I mentioned on Channel B on page 1-1. There is a double check after we do it fast for in the middle of it we go back and check the checklist. But you can not follow the flow of what you're doing 'n that checklist so we're using a summary timeline. And our cue card is basically the T-10 item under operator 1 on that summary.

SC

And Crip, I have mounted a DS card on the center of the panel which has four items on it: S192 door open, S191 door open, S190 door open, and tape recorder power ON, because these were the ones that are buried through the cutup checklist as it is now. And as you know, we missed one of those the other day, and I have that mounted right in the middle of the C&D console.

CC

Rodger, understand. Power on on 92, 91, and 193, and the tape recorder ON.

SC

No, no. Door, door open.

CC

I'm sorry.

SC

192 door, 191 door, 190 door and tape recorder power ON. Where are you?

CC

Roger. And we're about 30 seconds to LOS, and we'll see you again at Goldstone at 13:54.

SC

Okay, and on the other general message on question number 1 we'll try and tighten both switches on panel 617. We haven't gotten to that yet. And we have done question number 4. We have revoked the TCF logic CB's on panel 614. Okay.

CC

Okay, and we were happy with Paul's answer on question 3 on the evening questions.

SC

Okay.

PAO

This is Skylab Control. LOS Hawaii. Goldstone coming up in 2 minutes. Our estimate right now for change of shift press briefing with Flight Director Chuck Lewis, who will be accomplished today by Sy Liebergott who is the electrical environmental - all the other things

SL-II MC588/4

Time: 08:40 CDT, 13:13:40 GMT

6/6/73

that go into make up the acronym EGIL. Estimate is for about the next 10 or 15 minutes in the Houston News Room. Coming up in the next couple of minutes will be a downlink of the video tape - onboard video tape play back of the TV4 pass which has to do with the M110 blood analysis. This is delayed VTR dump taken some time ago aboard the spacecraft this morning. About a minute away now from acquisition at Goldstone. To repeat, Chuck Lewis, Flight Director, and Sy Liebergott, EGIL, estimate change of shift press conference in 10 or 15 minutes as soon as we chase them out of the control room. We'll probably take down the stateside pass if it's still underway when they arrive in the News Room and record for delayed playback after the press conference. Skylab Control at 13:53 standing by.

END OF TAPE

SL-11 MC589/1

Time: 08:54 CDT, 13-13:54 GMT
6/5/73

CC Skylab, Houston. We have you again over Goldstone now for the next 6 minutes.

SC Hey, Crip, I'm going to power down the teleprinter to change the paper.

CC Roger. Copy.

CC Skylab, Houston. I don't know whether you're aware of it or not, but we've been having some problems with CBRM 17. And there's not really anything physically for you guys to do, but I was going to give you an update on its status if you'd like to listen.

SC Yeah, go ahead.

CC Okay, on 17 the REG output is no more than two-thirds of its normal output during the day, but it reaches full output about 12 minutes after sunset. The battery's reaching charge complete in normal time. We think the problem is possibly a shorted REG output transistor. We had the same problem on day 144. It disappeared in about 10 hours. This problem began on day 157 at about 2:55 this morning. I guess really what this means is that we're going to be down some more power for your EVA tomorrow.

SC Roger, understand.

SC Hey, Crip, what's the number one if you attempted to tighten the loop and instrumentation system mode switch saddle 617? We tried, and they've got some kind of lock nut on them. We don't want to force them; so we'll leave them the way they are.

CC Roger.

SC Go out and tighten that lock nut.

CC Okay.

CC We're getting a chance to look at that TV you recorded for us this morning. Pete's got his arm out right now ready to get the needle stuck in.

SC Yeah, watch the eyes.

CC (Laughter) Did they go white?

SC And, Crip, you don't want us to operate in 55 at all this morning, right?

CC That's affirm. Not until we give you a GO on it. We're going to lose you for just a few seconds here, and we'll get you at Mila at 14:03.

SC Okay.

END OF TAPE

SL-II MC590/1

Time: 09:30 CDT, 13:14:03 GMT

6/6/73

PAO Skylab Control, 14:04 Greenwich mean time. We'll take down the broadcast line at this time for the Change of Shift Press Conference with Flight Director Chuck Lewis and EGIL Sy Liebergot in the Houston News Room. We'll playback on a delayed basis any air-to-ground that takes place during the remainder of this stateside pass and the upcoming Canary Island and Ascension pass. Skylab Control, 14:04; out.

END OF TAPE

SL-II MC591/1

Time: 09:32 CDT, 13:14:32 GMT

6/6/73

PAO This is Skylab Control; 14:33 Greenwich mean time. Skylab space station just passed over the hill from the Ascension Island Tracking Station on revolution 331; 21 minutes to acquisition at Carnarvon, Australia. In a short time there will be a replay or guess I should say a playback of video tape that was made at Marshall Space Flight Center, Skylab backup Commander Rusty Schweickart going through some of the EVA procedures in the water tank down there in the neutral buoyancy simulator. And we have about half of the previous stateside pass and the Canary-Ascension pass on - 4 minutes total on tape for delayed playback, now that the Change of Shift Press Conference is over. So during this gap between Ascension and Carnarvon let's listen to the audio tape from air ground; and for those in the Houston area, news persons in the Houston area, the water tank video tapes. Roll tapes.

CC Skylab, Houston we're AOS over MILA for the next 10 minutes - for the next 10 minutes. And Pete if you've got a chance to listen I've got a little more details on some of that SAF information I gave you this morning.

SC Okay, go ahead.

CC Okay. We have given that one region coming over the limb at 28 - at 1.0 number active region 31 and a leader sun spot is in view, with a small surge in progress.

SC Houston, SPT.

CC Go, SPT.

SC I'm not going to do M487-480 this morning. I don't have time. Could you schedule that later in the flight.

CC Roger, understand the gate 47 - 480.

SC Okay, Houston teleprinter paper is changed, and for information the diameter of this paper remaining was 7/8 inch.

CC Roger, understand 7/8 inch and it is changed out, thank you.

SC Houston.

CC Go.

SC I've got to see someone to operate 55. My pad is no good for JOP 7, paragraph 1, is that correct? You don't want to run that?

CC Stand by, pretty sure that's correct.

CC Pete, they checked out the high voltage and they'd like you to go ahead and use 55 as called for right after the roll in building block 1.

CC Skylab, Houston we're going to be LOS in about 30 seconds. We'll have you again at Ascension at 14:21 - 14:21 and we'll be doing the data dump at that pass.

SL-II MC591/2

Time: 09:32 CDT, 13:14:32 GMT

6/6/73

SC Okay.
CC Skylab, Houston; we're AOS over Ascension for the next 10 minutes and we'll be doing the recorder dump.

SC Okay.

SC Houston, you there?

CC Affirm, go ahead, Paul.

SC Hey, we realized last night that we're not sure what the status of the fire sensor control panel is supposed to be. They've all been on button 2 - most all of them - the last 4 or 5 days, whenever that message was sent up. Is that the intent or is the intent to swap the fire sensor control panel to bus 2 when CAUTION AND WARNING is powered down during the day, CAUTION AND WARNING 1?

CC Our intent is to leave them on bus 2 all the time so you won't have to be running back and forth changing them.

SC I love you Howard C. Griffith.

(Music)

CC Pete that sounds mighty sweet. We've got an indication right now that we do not have 82A in AUTO 1 NORMAL and we would like it that way, please sir.

SC Ah ha. 82A up here is in that AUTO 1 NORMAL, wavelengths ON.

CC Okay.

SC Now, let me give it - I gave it a start, maybe it didn't start. How's that look?

CC That looks good to us now.

SC Maybe I gave her a start - maybe I didn't I - operating light (garble).

CC Understand you had an operate light?

SC 82A has an operate light all the time and the frame counter is stuck at 182 which has been that way for the last --

CC Yeah, okay. Sorry about that. Forgot about it.

SC Well, I did too because I haven't had that much time on the ATM here.

CC Skylab, Houston. We're 1 minute until LOS. We'll see you again over CRO at 14:54 - 14:54.

SC Roger, Roger.

PAO This is Skylab Control, that completes the playback of the delayed air-to-ground recorded during the Change of Shift Press Conference. 15 minutes away from Carnarvon acquisition. The EVA team of flight controllers here in the Control Center headed up by Milt Windler is all in the process of watching the playback of the underwater simulation run at Marshall Space Flight Center in the neutral buoyancy simulator by Rusty Schweickart, backup Skylab commander.

SL-11 MC591/3

Time: 09:32 CDT, 13:14:32 GMT
6/6/73

And later today there will be a simulation - two way simulation between the crew of Skylab and the Flight Controllers here going over the EVA procedures. 14 minutes to Carnarvon and at 14:40 Greenwich mean time; Skylab Control.

END OF TAPE

SL-II MC592/1

Time: 09:53 CDT, 13:14:53 GMT
6/6/73

PAO This is Skylab Control; 14:53 Greenwich mean time. 50 seconds to acquisition at Carnarvon with a short gap between Carnarvon and Guam of about 6 minutes. The video tape playback of Rusty Schweickart's exercise in the natural buoyancy simulator has been discontinued here in the control room for a short period here until we have an LOS at Guam. Up coming on the stateside pass Rusty will discuss with the crew, probably starting here at Carnarvon, the checkout and run through of the so called EVA sim on getting equipment ready. And we'll have live TV hopefully during the stateside pass of the EVA - -

CC

- -over Carnarvon for 10 minutes.

CC

Skylab, Houston. Over Carnarvon for about 9-1/2 minutes.

SC

Roger. Hold it, Rusty. I got a question for you. Why - Is there any reason we can't use the one way reefing block on the BET also next to the big hook?

SC

We've looked at that Pete and it does not look as though that would take the load. You're talking about the - thing plane that was originally designed for the SEVA sail deployment.

SC

Yes.

CC

Okay, it does not appear that that will take the kind of loads that we need to put into that line, therefore we wanted to just tie it on to the apex hook.

SC

Okay, understand. I thought that that was probably the reason.

CC

Okay, what we'd like to do here in the next few hours is to handle any questions you have and with the total EVA we got a lot of information that we plan on passing up to you. However, we'd like first to handle any questions which you might have on the assembly of the gear, the hardware itself.

SC

Well, we have assembled the pole. As a matter of fact it's still all put together in here. We have lengthened the rope, we've assembled the pole, we have the horns on it, the brass horns and I've made the BET. The only thing I'm going to have to do is take the briefing block off it. I just left that there to see whether it could be used or not. And I think that what we're going to spend the next couple of hours doing is making up these packages. I guess if I have any questions at all it's mainly concerned with the general statement package for EVA deploy, and that leaves a lot to the imagination. And I think we're going to look around in there and think that over for a while. We've been talking about it but we haven't done any packaging

SL-II MC592/2

Time: 09:53 CDT, 13:14:53 GMT
6/6/73

yet.

CC Okay, you're entirely right. That does leave a lot to the imagination and we figure you guys got a lot of that. What we meant of course, is to essentially package the ropes in such a way that you - you do the equivalent of what Mike Bennett does over there with the clothes line packages. But obviously you're going to have to S the lines back and forth and put tape probably around each end or maybe just around the middle in such a way that as you string out - the thing is going down the EV trail, that it'll deploy nicely.

SC Yes, I wish they'd put more of my rubber bands in here than we have, cause rubber bands would have been ideal, I don't think we have enough rubber bands.

CC We did it, Pete, in the water tank using the gray tape and put a strip of tape around each end of an S - as we S the thing back and forth and put a piece of tape around each end and it tended to deploy quite nicely. We really did not run into any problems with it in the water.

CC Pete, you want to make sure also that when you put those ears on the tape when you fold the tape back over on itself you make those ears plenty large. What looks good without a glove on looks pretty small with the glove.

SC Yeah, I understand that.

CC Okay, and if you're ready, Pete, we can start on some of the detail information regarding the EVA operation itself.

SC Okay, I'm ready to copy.

CC Okay, first there's one piece of teleprinter update that hasn't come up yet and this is the additional EVA procedures which will cover you before the remove and re - retrieve and replace on the S082A, the other ATM operations on the sun end, the TV operation and that kind of thing. That will be coming up to you as soon as we can get it all verified and checked out here. It should be up sometime within the next few hours.

SC Okay.

CC Okay, to give you an idea of what you're going to see or what we think you're going to see when you get down there next to the beam I'd like to just refresh your memory on what that longitudinal splice looks like. The splice itself is made up of - aside from the meteoroid skin, is made up of two pieces of metal. One of them

SL-11 MC592/3

Time: 09:53 CDT, 13:14:53 GMT

6/6/73

is a - an angle which is made of 7075 T6 aluminum. And that's a 1 and a quarter by 3 quarter by 063 angle. The long leg of that angle, the one and a quarter, is against the meteoroid skin with the angle - that is a long leg pointing toward the meteoroid - or rather toward the beam. The -

SC Rusty, was the long leg attached to the meteoroid shield or was it attached the angle next to it?

CC The long leg is attached to the meteoroid shield itself and points toward the beam. The 3/4 inch leg then comes perpendicular to the meteoroid shield. The skin comes up against that and then there's a doubler plate which is 3 quarter inch by .125. And that's 6061 T6 aluminum, and those two 3 quarter inch legs are then bolted together. Now -

SC Okay, we understand.

CC Okay, now the bolts that go through those - that 3 quarter inch flange are pointed away from the beam. That is the bolt heads are towards the beam and the thread sticks through and they protrude a considerable amount up to a half an inch beyond the nuts on the - they go up against the doubler plate there. And we think that what happened was that that angle as it ripped off - as the meteoroid shield ripped off, was rotated 270 degrees and that the threads are sticking into the sides of the beam, right up at the top.

SC Yeah, something is making it stick to the beam, and that's probably it.

CC Okay, now the reason we wanted to describe that is because from your verbal description and also the the photo interpretation we've done from the enhanced TV it looks as though the 7075 aluminum bracket maybe missing as that angle comes up across the - the beam. And then right at the end it looks as though you've got both pieces of metal there. What we mainly want to let you know is that the doubler plate, the 3 quarter by .125 6061 is soft aluminum and is easier to cut than is the 7075.

SC Understand.

CC Okay, we also - I don't know if you had a chance to practice with the bone saw, but we've got identified for you a piece of 7075 aluminum inside and that was the launch support bracket. It's referred to in the switch activation checklist page 3-29. It's the bracket that held up the para 612 for launch vibration. That's a 1 and an 8th by 1 and an 8th 7075 T6 bracket and feel free to cut through it. The only precaution is that you want to have a vacuum cleaner sitting right on top of

SL-II 00592/4

Time: 09:53 CDT, 13:14:53 GMT
6/6/73

it so you don't end up with aluminum chips.

SC Okay.

SC Hey Rusty, I got one question on this doubler.

CC Speak.

SC Is the doubler on the backside of the meteoroid shield from the angle.

CC That's negative. Paul, if you'll lay the meteoroid shield right up against the skin of the vehicle, both - the seam is on top of it, that is on outside of the meteoroid shield. Well, I think you got the picture right?

SC Yes, I got that. But is the doubler on the other side of the meteoroid or between the shield and the angle?

CC Okay, starting from the left you have the - the 7075 angle. The skin coming from the left if you're looking plus X up? The skin comes over and stops at the edge of the 7075 angle. The skin coming from the right comes over to it and raises toward you 90 degrees. Up against the 3 quarter inch light the doubler is immediately on the right side of that, and both of those then are on the upper side of the others - that is the outside surface of the meteoroid shield. By the way, we got 25 seconds to LOS here, and we pick up Guam at 15:09.

SC Okay. I got a question then about the - about the vent module.

CC Okay, right. I got a description of that for you. You can keep right on talking here, we can listen to you any rate and know what your questions are and we'll be ready for you over Guam.

SC Okay, my only concern is what hole are you supposed to hook these hooks in. I was briefed before we left and was told that those rectangular plates were supposed to be blown off at liftoff and that then there would be two round vent holes in the module. Is that so or not?

CC That's not so, but we don't really need to worry about that because we don't use that part of it to hook on the - the deck.

SC That's all I wanted to make sure.

CC Okay.

SC Okay, I've got a couple of questions for you to consider in your restraint. Number 1, how did EV2 restrain himself so he could find the pole initially, and number 2, how does EV2 restrain himself while he is repositioning (static)

PAO

This is Skylab Control; 15:05. Brief

SL-11 MC592/5

Time: 09:53 CDT, 13:14:53 GMT
6/6/73

gap here between Carnarvon and Guam. We'll leave the circuit up for that gap. Some 4 minutes remaining for resumption of the description by Skylab backup Commander Rusty Schweickart of how the tools and materials available to the Skylab crew can be adapted for tomorrow's EVA to get the solar array panel out, the one remaining good panel deployed. Three minutes to acquisition of Guam.
15:06 standing by, Skylab Control.

END OF TAPE

SL-II MC-599/1

Time: 10:06 CDT, 13:15:06 GMT

6/6/73

CC

Skylab, Houston at Guam.

SC

Hey, Rusty. We don't understand what we can practice on with the bone saw. That support under that electrical panel is nothing but (garble), which is corrugated and then curled up at the ends. We thought you said something about 1-1/8 by 1-1/8 angle.

SCHWEICKART Okay, Paul. I haven't been able to physically check this. My understanding is, page 3-29 of the activation checklist, you remove an aluminum support bracket that's a launch support bracket. And I don't know whether you put it in the launch pin bag, or whether you screw it down to plenum, or what. I've never done that, Paul, in activations; so I'm not familiar with it. But that's what I was told. We'll get somebody to chase that down and let me press on here. Actually, if you find any nice aluminum bracket that doesn't seem as though it's terribly important, feel free. Just make sure that it isn't carbon steel or something you're trying on it.

SC

Go ahead.

SCHWEICKART Okay. Let me try and work in Joe's question as we get to that point. Pete, let me continue on the strap - what we expect to happen here when you cut through that. First of all, our first choice on the cutting is to go ahead and use the cutters with - on the long pole, with Joe pulling on the rope and you out there on the end of the beam, tethered to the BET at that time and having your left hand - That is, your head is toward minus X, and your left hand would be holding the cutter scissors. That helps to stabilize the cutters, and, also, when it breaks through, it keeps the cutters from flying up. Now what we expect to happen - and we want to make sure you keep your hands away from the strap at the time it cuts through, because there is a chance that the torsion lengths are still putting considerable tension on the meteoroid shield. And we expect that when the strap is cut through, it may spring out and then back underneath the beam to the extent of about 6 inches. Okay, the - -

SC

The (garble).

SCHWEICKART Okay. That is a particular trap, Pete, if you decide, for whatever reason, instead of cutting it to pry it off. If you are going to pry the strap off, it tends - we've done it a couple of times in the water tank, and it tends to be very natural to hold on to the - on to the strap with your left hand as you pry with your right hand. We feel that holding the strap is your choice for positioning, but when you go to pry, make sure you put your left hand on the beam and not on the strap. Okay. After you cut the strap, we expect, because of the frozen damper situation, that the beam may rise, just due to the spring actuator, - may rise about

SL-11 MC-593/2

Time: 10:06 CDT, 13:15:06 GMT
6/6/73

4 degrees after the strap is cut and before you really put any tension in the BET. So you want to be aware that it may start to come up there right after the strap is cut. Also recommendation after cutting the strap and when you get back down there to play the human (garble) pole game, getting under the BET to push up on it; we kind of recommend facing the end of the beam rather than back toward the FAS so that you can get a good view as the beam moves. And you can get a little bit better sensing when the actuator damper bracket begins to crack through. And it's quite important - I'll give you a little more history later on the beam, but it's quite important that when the bracket - when the beam first starts to give, and you can feel it in the BET, you want to slack off so as not to put any additional energy into the beam coming up. Pete, to give you a report on the test results here, we've broken quite a few brackets now. All of them tend to break at about the same point. The cold ones break with a slightly greater force. They tend to be a little bit stronger, but we're running on the order of 160 to 190 pounds tension in the BET when the bracket breaks through. That gives you an equivalent of about 90 to 100 pounds of compression in your legs. That is, that's about what you're going to end up pushing up with for compression in your legs when you get that kind of tension in the BET. and when the bracket begins to give. Now the bracket, as was reported by Don Dowdin earlier, does break in two different - You break off one side of the bracket first and then the other, and the first one is the one that takes most of the effort. It breaks with the equivalent of about 19 pounds at the end of the beam. That's about 170 pounds of tension in the BET. And, then, the second one breaks with the equivalent of about 12 pounds on the end of the beam, and that's down - I don't know what the number is, but it's considerably below what it takes to break the first one. So you can expect a sort of two-stage release of tension as you're raising the beam. Now the only - Okay, the only caution on it, Pete, is that when you feel the first breakage there, we expect it to be the bracket. However, there is still a possibility that the 1132 screw may go, and in that case, you want to give it time to come up by itself, because in that case the spring would be pushing it all the way up, and you do end up with a relatively healthy tip speed. The tip speed at latch at that point gets up to about 2.7 feet per second, and that's no problem as far as safety is concerned. The latch will take up to 3.4.

SC

Okay.

SCHWEICKART But just for safety reasons, it's a good idea, when you feel something break, to just stand back and let it go. Okay. We've got LOS coming up in about 55 seconds. We're going to pick up Goldstone at 33 and we'll be having real time TV available there. So anything you'd like

SL-11 NC-593/3

Time: 10:06 CDT, 13:15:06 GMT
6/6/73

to show us in the way of your assembled gear and point to it and ask questions or, you know, a show-and-tell kind of game here, going over the States, picking up at 33 at Goldstone.

SC Okay. 33 at Goldstone. We've got the TV up and running now up above, and we'll show you what we've got.

SCHWEICKART Okay. Now let me say that the VTR has been rewound; you have about 15 minutes available to you. If you want to put something on between now and Goldstone, it's available. I think it would be most desirable, unless we have a lot of TV, that we just do it real time. And it avoids confusion on the VTR. But that is your choice, and just let us know, coming up at Goldstone, whether we're going to go real time or whether we should replay VTR.

SC Rusty, we'll go real time, because we have everything assembled. And the only next thing is, by 17:00 we might have some stuff packaged. And that would be the other thing we'd want you to look at. We'll show you what we've got assembled, and that's about it for now. We've got the major (garble) in a second.

SCHWEICKART Okay. Good. That's what we were hoping. And I'll have more reports, especially for Paul, on that detail of what the vent module looks like and where we hook the BET on the end down there.

SC Okay. (Static, inaudible)

PAO This is Skylab Control. Loss of signal through the Guam station. Two fairly talkative passes there at Carnarvon and Guam, as Rusty Schweickart briefed the crew on what to expect in their EVA tomorrow. And the crew will turn on the TV camera for a live pass coming up on the States in 15 minutes, at Goldstone back at that time. And at 15:18 Greenwich mean time, Skylab Control out.

END OF TAPE

SL-II MC-594/1

Time: 10:31 CDT, 13:13:31 GMT

6/6/73

PAO This is Skylab Control; 15:32 Greenwich mean time; 50 minutes from acquisition through Bermuda. The video picture beginning to come through from the Skylab space station.

CC We've got you here at Goldstone for a nice long pass; Goldstone, Texas, MILA.

SC Roger.

SC Roger.

CC Okay. We've got TV. It's a little bit noisy yet., but we've got it now. So feel free to show us anything you want. Hold it up in front of the camera.

SC How do you read, Rusty.

CC Okay. Read you now, Pete.

SC All right. I didn't like the idea of (garble) wires (garble).

CC You're unreadable, Pete.

CC Yeah, that was a bit soft on it, Pete. You may have to stick that thing down your throat to talk to us.

SC Okay. (Inaudible)

CC Okay. We could read that you didn't like the wire on the tension bar, and you've rigged up ah - tape. The only thing that I can say, is that we used only tape and no wire around the tension bar. We did hold the wire loop you've got there secured very tightly and not just the tape.

CC Yeah, Pete. That may get kind of warm out there in which case it's going to lose its strength and slide around a lot. Hey, Pete, or that pinch bar, also, not included in the procedures is for you to - or EV 1 to take that off of the BET before you start pulling up on it, even if you don't use it. We'd like to have that done, just so you don't have that extra mass setting out there on the BET.

CC We see the doctor getting into his suit. We wonder if he's going to try and go out there today?

SC No. I want to get a halfway feel, for the typical feel of handling that 25-foot - never mind.

CC Okay. We think that's a good idea Joe.

CC Okay, Pete. We can see the - that you've got the bridal rope there with a small Apollo hooks on the end. You're bow in there, that looks just right. That looks good, Pete.

CC Okay. And since you had that, let me at this time, just give you a couple of words on where that goes when you get down to the vent module. The vent module itself - and Paul, you may have out that same SWS map diagram. When you look at that, the vent modules that are shown on SAS beam 1, are actually upside down. They should look like the ones on SAS beam 2. Now that's not terribly important but the diagram is a little bit wrong there.

SL-II MC-394/2

Time: 10:31 CDT, 13:15:31 GMT
6/6/73

SC

We noticed that last night.

CC

Okay. The trailing edge and, Pete, let me see yeah, we got your look at the apex hook and that's exactly what we're talking about. Let me only say that the crew systems people have looked at the rope and the limiting strength on that and they have come to the conclusion that when the rope breaks - when they break it around 400 pounds or so of tension, and it's - it gives at the notch. Usually where the rope goes around an edge. Okay. That looks real good, Pete.

CC

Okay, Pete. Also on that you do need some way of retaining that stop on the apex hook, so it won't open up on you.

CC

- - module Pete. And go to hook on the bridal. The trailing edge of the vent module has a slight fairing - a triangular fairing which brings it down smoothly to the beam. That fairing is about 3 inches high, the same height as the vent module, and it's about 6 inches long. At the point where the lower corners of that fairing come down to the surface of the beam, there are stress release cutouts right down there, and you can hook the small Apollo hooks into those small cutouts. They go in relative / easily, however, the Apollo hook will not lock, that is the jaws on the hook will not close. So what you need to do is to coordinate that with Joe, so that when you put the bridal into the aft portion of the vent module, you maintain a slight tension yourself until Joe cinches down with the apex hook on the other end. That takes out the tension. Okay, we see you headed for a speaker box there, and we're about 35 seconds from an LOS and we'll have about a one-minute drop out until we pick you up at Texas.

SC

Okay, Rusty. I need to have you tell me about that - I understood that they weren't going to hold, but I want you to describe the end of box again for me.

CC

Okay, fine, I'll do that, Gene. While we've got just a few seconds here, we may go LOS while I'm telling you this, but just for your information. The damper - the actuator damper for the beam is still at minus 60 - minus 60 degrees, so that we do expect that you will break the bracket. The dampers in the SAS panels are all reading minus 40 degrees. And I'll have a few words about the SAS panel deployment itself, because we do have a relatively critical operation on that. And we're going LOS, now.

END OF TAPE

SL-II MC595/1

Time: 10:40 CDT, 13:15:40 GMT
6/6/73

CC Okay, we've got you again here at Texas, Pete. If Paul has got that SWS map out, he can sort of sketch this in also. The BET runs vertically down - it runs almost down the middle of the beam. So if he wants to draw a vertical line on that thing that goes almost down at 8.0, the bridle - the intersection of the BET - of the long part of the BET with the bridle occurs just about at the top of where the louvers would be in the middle of the vent module. And the bridle then goes down to the two lower corners, to the left and right lower corners of the vent module. Now what you've got there, Pete, is essentially a single piece of aluminum that makes up that aft fairing. And right down on the surface of the beam, the extreme lower corners of the vent module have a small cut-out there, just rounding, so that there are no sharp - there aren't any high stress points on that piece of aluminum. And I'd say you've got an opening which is about 1/2 inch to 3/4 of an inch high - an opening which is about 1/2 inch to 3/4 inch high and probably 1/4 inch wide. And the hook of the small Apollo hooks there - the hook portion of it will slip right into those. You have to sort of hold the hooks horizontal, if you're looking at that map, and slide it in. And then when you take up tension, the hooks will stay in those slots.

SC (Garble) - yeah, I did not use tether hooks. I used the two tether hooks off the other end of the Apollo sail.

CC Okay, those are also the small Apollo tether hooks, right?

SC Right, as best as I can tell. I'll go compare (garble).

CC Okay, that's fine. They'll take the stress. I'm sure that they're the same Apollo hooks and understand you just wanted to save the wrist tethers. That's just fine.

SC Yeah.

CC One thing that will help you with those hooks, Pete, is to make sure that they - if the springs are functional so that they are spring-loaded closed, because they'll help hold it into the hole before you draw up tight on the BET.

SC Understand that. Tell me another thing. Just how do you get yourself under the BET?

CC Okay, after you - first of all, when you go down - we're going to talk a little about the details of going down there. But what you do, Pete, once you're ready to cut through the strap, you take your - the Apollo waist tether and hook it to your right wrist, and you take the big end of it and hook it to the 32-foot section of the BET rope that is above the intersection with the bridle.

SC Roger.

SL-11 MC595/2

Time: 10:40 CDT, 13:15:40 GMT

6/6/73

CC And after the beam is free, what you do is using that rope as a trail, you just move back above the hinge line and just work your way underneath the line. It's not that tight. There's really no problem. And as soon as you get underneath it, as you begin to raise up, you put compression on yourself. And so it's quite natural to be able to stand up, and the rope holds you down nicely against the beam fairing.

SC Okay.

SC You can't (garble) the discone antenna if you are looking at minus X (garble). The discone antenna is on the right about 9 inches away sitting in an angle channel, isn't it?

CC That's very good, Pete. It is about 9 inches to the right, and it's oriented parallel to the FAS separator wing there. Now --

SC Okay, we can see it from the window - the STS window.

CC Ah, that's great. We never even thought about that. There is one caution that we want to give to Joe and that is that he wants to tether his long tether - it's hooked to his chest at that point, and then the discone antenna itself becomes one of the things he could use for his stabilization as he tries to lay the cutters down alongside the beam. Now, just for your information, you can put 40 pounds of force 4 feet up from the bottom of the discone antenna, and that'll give you a factor of safety of 2 on that. A precaution though is that at the base of the discone antenna, there are two COAX connectors which provide the signal path down inside, and - Joe wants to be careful not to mash those connectors.

SC I'll just say it now. The A frame that you're referring to is the two (garble) members that the discone antenna tray is mounted on, is it not?

CC That's exactly right. The discone antenna tray is mounted at the minus-X end on a cross member that goes between two of the DA trusses, and that's what the apex hook goes over. And the end of that - the end of that cross member is directly in line with the SAS beam so it causes the BEI to lay right down on the center line of the beam just right.

SC Now, wait a minute. Say that again.
Let it go.

CC Okay, if Paul's got his diagram out, and he draws in the DA trusses - okay, you've got the diagram right in front of you. The two DA trusses - one of them comes out of the FAS ring at about 7.6 and D0, and the other one comes out at about 9.2 in D0. And they go respectively up

SL-11 MC595/J

Time: 10:40 CDT, 13:13:40 GMT
6/6/73

to 8.0 and A0 and 8.8 and A0. The trapezoid up there with those two DA trusses.

SC Okay, now that's the one that's got the discone antenna tray. That's also the one we could see from the window.

CC Okay, right. The cross member goes between those two trusses, and it's located 6 feet off the FAS ring. That would be on the diagram horizontal line at about A2.

SC Okay. Rusty, where do I put my feet?

CC Stand by just a second, Joe. Pete, the left hand end, looking at the diagram with plus X up - the left hand end of that cross member then is directly in line with the SAS beam, and that is where you hook the apex up.

SC Okay. (Garble) we can see all that out the STS window.

CC Yeah, that's great. We never even thought about that, and that's better than any diagram we've got. Now, Joe, what you do is when you first get up there on the A-frame, you'll tether the long - your 6-foot tether that's hooked to your chest to that pen at the base of the discone antenna, and that becomes your prime tether point. You can get from the FAS beam, rather from the FAS, then the discone antenna all the way back to the A-frame without ever disconnecting that tether. It allows you good freedom for getting back and forth. Now what you do when you're trying to lay the cutters down the side is you tend to use the edge of the FAS ring, watching out for those COAX connectors for your feet, and you can wrap your left arm around the discone antenna itself. And of course it's a lot easier - should be a lot easier than in the water tank where you're fighting all the drag and buoyancy. And you should be able to place the cutters right down alongside the beam.

SC Are you guys standing up along the radial axis?

CC That's affirmative when you're hooking on the cutters.

SC Okay.

CC When Joe goes - after you get the bridle hooked up, the BET hooked up, and you're ready to actually cut, what Joe wants to do there - we found a cutting technique where what Joe does is lay down along the rods, face down to the workshop, and hooks his toes over the FAS ring. In other words, his toes are draped over the FAS, and he's laying down along the outside of the FAS. And all he does is pull on the rope that causes the cutters to cut. He doesn't have to worry about putting compression in the rod, in other words; just pull on the cutter side of the rope.

SL-II MC395/4

Time: 10:40 CDT, 13:15:40 GMT
6/6/73

SC Okay, about those connectors. It's obvious that there's a risk that they'll be damaged or broken off, and that's something we're just going to have to accept.

CC Right. We recognize that, and all we're asking for is reasonable prudence on your part, Mr. SFT.

SC Right. And in that evolution and also in the evolution of repositioning the scissors and so forth, we'll just have to wait and see when we get out there whether we have adequate restraints to do the job. We're pulling on that clothesline. It sounds like you need to be a little negatively buoyant, and I'm not sure we can manage.

CC Negative. When your toe is hooked over the FAS ring there, Joe, and you're holding on to the rope, it just pulls you out straight, right along, and you should be able to put quite a bit of tension on that rope. And Pete will be holding the other end of it, and he'll be holding the scissors on the cutter, and that'll stabilize it when it cuts through the aluminum.

SC It's not so much a matter of getting into a position as it is maintaining it while you're exerting forces.

CC Joe, I think you can do that quite easily if you just make a slight V out of your body. If you've got your toes down and your head on the vehicle and you make a slight V, when you pull on that rope, that's going to put you right down tight - right next to the vehicle.

SC Okay.

CC At that point, let me just mention the technique for hooking it over the - that we've found works best for hooking it over the aluminum strap. And that is when Joe lays the cutters down the beam to have the body of - the cutting edge up against the beam and just sort of slide it down the side of the beam until you hit the strap. And then bring it out and over the strap so that the cutters are just on the other side. And then you pull back, and as the cutters ramp up over with the jaws open - first of all you want to make sure the jaws are all the way open. But then as you come back toward you, the cutters will fall right over the strap, and then you can sort of give it a slight push and pull and make sure that it is there. And then clamp down on the jaws.

SC Rusty, you're still maintaining that he's going to find the best place to get a bite on the strap on the side of the beam fairing, right? Rather is it on the top?

CC Yes, that's what it appears from our photo analysis, Pete, but you know you'll have to make a judgment on that when you get out there. But we think that you probably should cut it, without any question, below the

SL-II MC595/3

Time: 10:40 CDT, 13:15:40 GMT

6/6/73

point at which the bolt heads are dug into the beam. And we think that the side where you reported that it was bowed out 2 to 3 inches should probably be the best place to put the cutters over it.

SC Yeah, because it's darn near flat across the top. I - you know, Paul could barely get the little pointed prongs under it.

CC Right. We've been doing all our work down on the side of the beam, just about the middle there, half-way up to the top of the beam. And it tends to hook on relatively easy. And once you've got it clamped, it makes a very nice pole going down there. By the way, we've got 10 seconds to LOS here at Bermuda, and we'll be picking you up over Ascension at 01.

SC

Okay, we've got some more work to do.

CC

Okay. And at that point, Pete, I want to talk about some timing here - the day-night cycles and that kind of thing and a few constraints regarding lighting.

SC

Okay.

PAO

This is Skylab Control; 15:52 Greenwich mean time. Loss of signal through Bermuda for a rather lengthy discussion there between both Ed Gibson and Rusty Schweickart in the Control Center and the Skylab crew, going over all the nuts and bolts details of arranging and building up the equipment on board Skylab for tomorrow's EVA. Next station in 7 minutes - little over 7 minutes for Ascension Island Tracking Station pass. And after loss of signal at Ascension at approximately 11:08 or 11:10 central daylight time in the Houston News Room, Dr. Royce Hawkins and selected principal investigators will hold a briefing on medical experiments status. That's at Ascension loss of signal, which will be in about 15 minutes. Dr. Royce Hawkins and selected medical experiment principal investigators. Back in 7 minutes. At 15:54 Greenwich mean time, Skylab Control.

END OF TAPE

SL-11 MC-596/1

Time: 10:59 CDT, 13:15:59 GMT
6/6/72

PAO This is Skylab, Control; 15:00 Greenwich mean time. 50 seconds away from Ascension Island. A very brief pass of only 5 minutes duration. Elevation angle only 3 degrees above the horizon. Final Ascension Island pass in the morning and for several revs until the ascending node moves farther westward. The start of revolution 332, we're stand by for resumption of air-to-ground communications and after Ascension loss of signal, the medical experiments, status briefing will take place in the Houston Newsroom with Dr. Royce Hawkins and selected principal investigators.

SC (garble))

CC Hello, there again sky troops, we're back again at Ascension.

SC Go ahead.

CC Okay. Just a couple of things on my list here that I'm looking at that I missed. For Pete, as I say the expected happening is that the bracket will break when you raise up on the BET there. And the studies all show that the expected tip-speed of the beam coming up, is going to be something less than 1 foot per second. If you work all that out, that says that isn't going to get up and latched until about 1 minute after you break it, so the thing doesn't really snap right up at you. So, you don't want to be too anxious. Just pull it and watch it come up slowly and you may, in fact, have to help it up, if the friction is higher than the good troops here on the ground have computed.

MCC One point for you there, Joe. If that does give you a fair amount of time for umbilical management of EV-1.

CC Okay. Pete, the other thing I want to mention to you was that after the SAS beam comes up and latched, the actuator dampers on the SAS panels themselves are about 40 degrees, and that's minus 40 degrees. We expect that they will come down - All of them will begin to come down and lock. The deployment of those panels is expected to take about 10 minutes, until they get fully down. Now, the important factor in all of that, is that if the beam comes up, but the panels do not come down, we need to make a maneuver fairly soon, in order to get sunlight on the beams so that the actuator dampers will heat up. Conversely if we do not maneuver, if the beam comes up and the panels do not deploy, the actuator dampers will begin to cool off rather rapidly which means that it will take even longer to heat them up. So, we have a maneuver planned, and standing by for about - oh I'd have to get the detailed timing, it's about a rev after

SL-11 NC-596/2

Time: 10:59 CDT, 13:15:59 GMT

4/6/73

you pull the beam up, maybe a little less. And let us know if they do not come down, within 10 minutes, or if they're not on their way down, and we'll probably maneuver about 45-degrees plus X toward the Sun, to get sunlight on the top of that beam.

SC Okay. I suspect that we might not get the beam deployed, assuming that we do, until the second day period.

CC Right. I'll talk to you about timing on that. It looks like we've got a minute and 45. Let me just start on that and say that all of the planning here is to get you at a point, about 15:37, tomorrow morning, just a little less than 24 hours, where you open up the EVA hatch to start the EVA at Sunset. This gives you about - -

SC Okay. We understand that Rusty. I've got another question.

CC Go ahead.

SC When the pole is deployed, how tight was it possible for human hand to cinch it up - at my end? And after the strap is cut, does the pole then become useless as a handhold for Pete?

SC Okay. I would guess, Ed didn't say it, but I guess he put probably 20 to 25 or 30 pounds of tension in the line just to cinch it up to make it a hand hold at the beginning. After the strap is cut, that's affirmative. What we recommend on that is to swing the cutter back up almost 180 degrees and lay it toward plus X to get it out of the way when the beam comes up, so there's no question that it might snag on anything. Pete has his way to get back up there using the BET. He's going to be directly under it and as soon as he snaps the thing, you just slowly make your way back up to the pass.

SC You'll be coming to the BET at that point, Joe.

SC Yeah. I understand that. I foresee him having a little trouble getting up onto the rope and I also foresee him having a little trouble repositioning the jaws, if he has to. But we'll just have to work it.

SC Okay, Joe. We'll talk about that at Carnarvon at 11. We're now essentially LOS.

SC Bye-by.

PAO This is Skylab Control; 16:06 Greenwich mean time. Loss of signal through Ascension Island tracking station. 24 minutes to Carnarvon. The medical experiment status briefing in the Houston Newsroom will begin as soon as the participants show up at the newsroom. I understand they're on station in the newsroom at this time. Any ground station passes that take place during the medical experiments briefing

SL-11 MC-596/3

Time: 10:59 CDT, 13:13:59 GMT

6/6/73

will be taped for delayed playback. It'll probably have live television again on the next stateside pass in as much as the landlines are still least, at 16:07 Greenwich mean time; 23 minutes away from Carnarvon acquisition, Skylab Control; out.

END OF TAPE

SL-II NC-397/1

Time: 11:47 CDT, 13:16:47

6/6/73

PAO This is Skylab Control; 16:47 Greenwich mean time. We join the conversation in progress over the Guam Island Track Station; and we'll play back the previous Carnarvon Station after Vanguard loss of signal.

CC And then tape the keeper so that it stays - you make sure that it stays on that truss.

SPT Can he put the tape on the - on the hook somewhere?

CC Yeah - What we were thinking, Joe, was for - in the prep, all you do is take a piece of tape that's 2 or 3 inches long and stick it to the side of it - of the apex hook. And then when you hook it over the truss out there, you just pull off that tape and wrap it around the keeper so that it stays in the closed position.

SPT Okay.

CC Okay, and then after EV 2 has got the cutters way down there and hooked on to - on to the debris, you then want to - you know, on the mushroom end you've got the adjustable waist tether - there the old Apollo waist tether - and after you've got the far end hooked up, you synch down all the way on that waist tether, and that makes the hand rail going down, which is quite close to the skin, and it makes it very nice for transporting down there.

SPT Understand.

CC Okay, when EV 1 swings over, to position himself on the - on the handrail going down, what we're recommending is that you end up with your belly - EV 1 would put himself on that handrail with his belly toward the workshop and his legs away from the beam; that is, further around toward minus-Z. And that way you go down with your left shoulder toward minus-X and the BET is hooked to your right wrist and trails out behind you and EV 2 guides the umbilical and the BET behind him.

SPT Understand.

CC Okay, so in other words, you go sideways, moving to your left down - the EV 1 will go sideways, moving to his left, down the handrail. And as he gets down into the area of the beam, he's got a very nice view there - almost parallel to the underside of the beam, and you can take a pretty good look at the situation there with the meteoroid shield.

SPT Okay.

CC Okay, now when EV 1 - Oh, by the way, I forgot an important point. Before you start down the beam, as soon as you got - as soon as you got hold of the handrail, what we're recommending is hooking up the large hook that's on the waist tether on the left wrist of EV 1, hook the large hook over the cutter rods and just push it down ahead of you. That is, it slips over the rods and it'll go past the joints, and that way, you're tethered to the rod all the way down.

SL-11 NC-597/2

Time: 11:47 CDT, 13:16:47 GMT

6/6/73

SPT

Okay.

CC

Okay, now when you get down to the end, in order to get you all the way down to the good working area, what we're recommending is when you get to the end of the rods, to take the waist tether off the rod and hook it on to the cutter scissor mechanism. That'll allow you to get all the way down as far as you want to go to look at the area, and also to help you hook on the BET to the aft end of the vent module.

SPT

Okay.

CC

Okay, and then the next thing is after you've got the BET hooked on to the vent module, and, Joe, after you've taken up the slack out of the BET, then what Pete wants to do is take that tether and hook it to the BET itself. Then your - that's sort of your final tethering point down there, once you've taken the slack out of the BET.

SPT

Yeah, I understand, Doc. He's going to be using the BET as his handle goes back up, too. Right?

CC

That's correct, Joe.

CC

That's affirmative.

SPT

Is he going to have some trouble with roll control? You can't really set any torque on a rope.

CC

That's right. The way I found, Joe, is just go down hand-over-hand; when you get to the point you want on the rope, don't worry about attitude control. When you get to the point you want - and by the way, you'll be pulling his umbilical end to keep the slack out of it when he does that, you'll - you get yourself bally down to the beam up at that end, and you don't - there isn't any real debris or anything up there that's a worry that much about, at least that we can see. And all you do then is start lifting up on the rope and it'll force you right down against the top of the beam, and it's really not too difficult at all. I was actually positively buoyant at that time, and, nevertheless, had very little difficulty in getting under the BET.

SC

Okay.

CC

That S13G white paint they've got out there has got a pretty high coefficient of friction, and it's pretty easy to work with. When we were in the water, we were working on slick aluminum; and still pulled it off.

SPT

Okay.

CC

Then after the beam breaks free, we have one caution there. As the beam rotates up; the mechanism does form an opening there between the moving part of the beam and the fixed part of the beam - the fairing up at the top. It sort of opens up and then closes again as it comes up to

SL-II MC-597/3

Time: 11:47 CDT, 13:16:47 GMT

6/6/73

the full latch. Sort of like a clam shell opening and closing. And so after you break it loose and it starts to come up, you'll probably want to retreat back up to the PAS ring and watch it come the rest of the way up from there. If it needs some help, you're in a fine place to go ahead and - mounting the A-frame - just go ahead and pull in on the BET to help it lock up.

SPT Okay. We won't put our finger in there.

CC That's probably a good idea, too.

PLT Okay, Rusty, is that little hinge door - is that on the high side or the low side of the hinge line?

CC Okay, the door that's open, Paul, is on the moving side. It's on the low side; the latch itself is on the high side - just the little thing that the hook hooks over.

PLT Now, the hinge is angled from - it moves in the plus-X direction as a component. Is it on the more plus-X end of the hinge line or the more minus-X end of the hinge line?

CC Yeah, it's on the low side. The Sun side over there.

PLT Okay.

CC Okay, we've got 35 seconds to LOS here at Guam, and we'll be picking up Goldstone with TV again at 10 - 17:10. And we'd like to - we do have some stuff on the video tape recorder from this morning's M110; and depending on what you'd like to show us, we would like to see your stowage and stuff, but when you're not going to show us something on TV, why don't you let us know and we'll dump it, and we can interrupt the dump any time to come back to real time.

CDR Rusty, we don't have any stowage to show you, and we're starting to work that now, and I don't think we'll have a lot of TV to show you in the next pass here, so go ahead and dump the dern thing.

CC Okay, I'll tell you what. We'll come up dumping it. Just let us know when you want you want to switch to real time.

SC Okay, well, when you're done dumping, switch to real time (garble) camera. Hey, I just made it a deployment of the BET, and I think I have that worked out. I'm using the little bag off the side of the JSC sail that contained the whole thing. And I'll put (garble). You know what I'm talking about.

CC Okay, sounds fine.

PAO This is Skylab Control; 16:55 Greenwich mean time. Loss of signal through Guam. We have 11 minutes of tape that was accumulated during the Carnarvon pass and early portion of this Guam pass while the Medical Briefing was underway.

SL-II NC-597/4

Time: 11:47 CDT, 13:16:47 GMT
6/6/73

Let's roll that tape and then go live for Goldstone and the upcoming stateside pass.

CC Okay, Sky troops, we've got you over Carnarvon for 10 minutes, and Ed's got some cutting techniques for Joe.

SPT All right. Tell the deft surgeon's fingers are proceed.

CC Okay, Joe. The easiest - quickest way to get through the metal, even though it seems a little frustrating as you do it, is to give a steady pull on the line for around 2 to 3 seconds. It takes a little while for the rope and the linkage to all respond and for the cutter jaw to creep through the metal. Then just relax and then have another go at it and another 5 or 6 seconds, hold it for 2 or 3 seconds and if Pete's down there at the other end he might even want to move the cutter around a little bit so it can work its way through. You really don't have any feeling when you're pulling that rope that it is going through yet no sensation whatsoever so it seems a little frustrating. Pete might be able to see the progress of the jaws through the metal down there and tell you what's going on but all you've got to do is just have patience and keep pulling for 2 or 3 seconds back off and then just keep it up that's the easiest way and all of a sudden you'll snap you right through. We've gone through - I've gone through it twice in the water and I tried one time standing up with my axis of my body parallel to the discone antenna and that's a pretty inefficient way because you really can't apply much force for a period of time before you just pull yourself right on down the - towards the beam. The best way as we point out was to hook your toes over and you can get a whale of a lot of force like that. It's kind of like chinning yourself on a rope.

SPT Could you use a lot of force?

CC With my toes over, I could use a whale of a lot of force. Yeah, I was estimating I was putting in maybe a 100 to maybe 120 pounds or so and I might have been able to put more on it if I'd really made a little larger V out of my body in order to keep my toes underneath the SAS.

SPT Okay, about how many pulls did it take?

CC Okay, using the technique of putting my feet underneath the FAS I never went end to end on that one. I finished off a cut which I had started with the old technique and it took around two pulls once I got my feet, my toes by the FAS. One word on when you first hook it on, you don't want to try to go through it there. It only takes maybe 30 - 40 pounds of pull for - just to cinch it up and make it snug. If for some reason you do cut through or even if you can't go down that - on the strap at all just find you another piece of debris and hook it on there. All we need is to

3L-II MC597/5

Time: 11:47 CDT, 13:16:47 GMT

6/6/73

secure that other ending anyway you can.

SPT Yeah, well that's why I asked how many pulls it took to cut it. I wanted to have a feel for how hard I can dig in that first time.

CC Okay. I'd be surprised if you went through in two or three seconds pulling with maybe 50 to 60 pounds. I suspect you're going to have to do that half a dozen to a dozen times.

SPT Okay, fair enough. Let me ask you this, based on your most accurate knowledge, how much extra length is there in that pole? How much am I going to have over my shoulder?

CC Joe, you're asking how much rope you're going to have left over from the mushroom on - is that correct?

SPT No. That's a matter of how I rig it. I'm asking how much pull I've got left - let's say from the edge of the FAS on - in other words how much more pull do we have than we need?

CC Okay, you've got just about a foot or so. It extends just a little bit over the ring of the FAS.

CC Joe let me point out that you can control that to a certain extent because the strap angles up across the beam. If you hook on to the bottom edge of it - it's closer to you - you'll have more hanging over the FAS if you hook on nearer the top you'll have more. Right about the middle of it from the photos you've got about a foot back of the FAS ring now.

SPT Okay.

CC If you're thinking of using the mushroom, Joe, I tried that and found it a little bit hard because you only find yourself torquing your body right around the mushroom itself and never really being able to get a good secure hold on it. There is a way you can keep from torquing your body about the center of the mushroom when you're pulling.

SPT I believe that. I was thinking about where that little cleat was going to be in reference to my precious little head.

CC Yeah, that's - in fact that'll be back down there by your feet or so at that point.

SPT Okay.

CC Okay and for Pete let me say a couple more words about the timing here. We are planning at the present time to have not just the EVA lights on but also the docking lights and there is a docking light about plus Y and - let me look at it - at minus Z and minus Y on the FAS ring and we feel that those should light the area out there near the A-frame. So what that'll do is enable you to get to the point where Joe is ready to lay the pole down alongside the beam. At that point

SL-II MCS97/6

Time: 11:47 CDT, 13:16:47 GMT
6/6/73

we're saying why don't you halt there and wait for sunrise. Now if the docking lights are either unnecessary and we can turn them off to save power or you're ready - you're already in position and it's still prior to sunrise we'd like to go ahead and turn off the docking lights. Also, if for whatever reason it takes longer than the day pass to cut through the strap and get the beam raised, we would like you to return to the lit area, that is back toward the FAS, normal EVA work pass - during the night pass. Now, since we have some activities down at the front end pinning the 54 door open and changing out the 82A film you may just want to, in case of that situation, you may just want to do that during that night pass rather than just cooling it. But that's your choice. We do have four hours and there's plenty of time to do it all.

SPT Roger, understand. I guess there will be some details about 82A on the teleprinter. That's pretty low on our priority list. The 54 thing I take it is just a matter of unpinning, opening and making sure that it locks open, is that right?

CC That's correct. The 54 door will already be open, it's a matter of unpinning and opening it another 10 degrees up against the stop and then lifting that little latch that holds the door open, Joe.

SPT Okay are you going to teleprint a proper roll for that?

CC Right. What we're doing - that is going to be on the pad and all we do to it is go to minus 120 degrees on the canister roll during the prep. That's essentially the normal attitude for the 82A replacement, Joe, you should see essentially a normal front end when you get down there.

SPT Okay, that's nice. Okay, and we understand about the lighting.

CC Okay, let me just tell you what our whiff experience has been over the neutral buoyancy tank. We ran the whole exercise end to end - took an hour 37 minutes from hatch open to hatch closed. That included perhaps 10 to 15 minutes in the middle of the run taken out for buoyancy problems, reweighting and that kind of thing. And also we lost some time because we cut through the straps three different ways rather than just using the first way that worked. So we feel that you will be able to do the preps and get in position to lay the beam down with plenty of time before sunrise and then we feel you'll be able to do the strap cutting and the beam raising well before the next sunrise or sunset rather, but as I say we do have four hours so there's lots of time and the main thing is remember Dick Gordon (garble) -

SL-II MC597/7

Time: 11:47 CDT, 13:16:47 GMT

6/6/73

SPT Yeah, you might find that our attitude differs a little bit from yours in the water tank. We're going to have to take care at every step to watch where the umbilicals are, and where the tethers are and to keep our options open. I rather expect and I'd like to be pleasantly surprised that it may take us two day periods to get all this done.

CC Right, we have prepared for that, Joe. And we don't expect that it will but you guys are the judge and the best thing in the world is to go slow and do just what you said.

SPT That's right. I guess we'll know better when we see it but our initial impression is that we've got a 50-50 chance of pulling it off and even if we don't we'll have a fine reconnaissance for you and some real good words on techniques and possibilities for another try later on.

CC Right, that's just the way we figure it except we'll give you a higher probability. And we're about 30 seconds from LOS. We've got Guam coming up at 45 and we would like to talk to you sometime about techniques on handling the - where to put the umbilicals and the tethers and that kind of thing.

SPT Okay, we'll be here.

CC Okay, Pete, now I have one word for you on maybe the best location to put those vise grips on the PCU.

CC Okay, Skylab, Houston back again over Guam for something like 10 minutes.

CDR Okay.

SPT Talk umbilicals.

CC Okay, Joe, when you guys first get out EV1 in the foot restraints and you take the BET out and stow it there on S7 handrail, assemble the tethers and all that, your EV pass will be - we have passed this up but you can remember it - F9 and F11, the two short handholds up in front of the hatch that we've never used and from there you go along that - the silver tape MOL SIEVE vent duct that goes - that runs right along the MDA there and you just hand over hand there underneath the DA trusses, you know, right along the MDA until you get to the area of the A-frame and you just push yourself up. It's about a 5 foot reach. And you just go from there directly to the A-frame. In other words, your umbilical comes along the MDA through the trusses and then up to the A-frame. EV1 will take the same path. And also when you pass the poles from the FAS; when EV1 passes the cutter up to you he also does that through the trusses - that is up underneath the trusses and when you get hold of it there you'll run it out - you'll receive it and run it out to the

SL-II MC397/8

Time: 11:47 CDT, 13:16:47 GMT

6/6/73

mushroom almost parallel to the discone antenna.

SPT

(garble)

CC

Okay, (garble) one point on that when you do first get out there you do want to tether yourself as opposed to mounting the A-frame. You can stand on that A-frame once you've got the tether in place and one thing we sure learned from the water is that we've got real luxury in the way we've designed the AIM film retrieval with all the good foot restraints, once you don't have those things you've really got to tie yourself down well and do it early, and do it religiously.

SPT

Okay.

PAO

This is -

END OF TAPE

SI-II MC-598/1

Time: 13:06 CDT, 13:17:06 GMT
6/6/73

PAO This is Skylab Control. That concludes the playback of tape accumulated over the Carnarvon and a portion of the Guam pass earlier in this revolution. The 2-minute warning warbler has gone off in the control room, for acquisition at Goldstone. And as I gather the situation on television, the earlier VTR recording of the M110 blood sampling TV-4 will be played back first and then possibly the crew will switch back the - to the live TV camera. And we're about a minute away now from acquisition of Goldstone. And we'll stay up live through M110 loss of signal on rev 333.

CC Hello, sky troops, we've got you through Goldstone for 16 minutes.

CC Screwing up your courage, Pete?
SC We're here, guys. We're just screwing around, getting fixed up.

SC Okay. Do you have any good words?
Speak.

CC You want to listen while you do scurry around there?

SC Yes, sir.

CC Okay, Pete. There are 2 other things which we'll be mentioning, reminding you of tomorrow - just 2 things while you're out there, we want you to take a look at, not be going anywhere, but just look at them. One, I've already mentioned which is QUAD A on the CSM. And that's because the temperatures are running a little bit high and we just want your comments on whether there is any discoloration or anything of that kind around it. The other one, you might, want - PJ knows where it is, but you might want to look at it on that SWS map, and that is while you're down there in the region of the SAS beam we'd like to have you look over at the forward umbilical connection point, which is just above the OPS tunnel. What we're doing there, is just looking at it to see whether or not there's any debris in that umbilical connection point. If we have to do anything on Skylab III and IV in a way of plugging in any auxiliary electrical stuff, the guys are looking at using that forward umbilical point to do so. So, it's just a matter of looking at it - taking a look at it and say it does or doesn't have any debris around it.

SC Okay.

CC And as I say, we'll remind you of that tomorrow, we just didn't want to surprise you with it.

SC Rog.

CC And I think that we've just about complete, the - everything we wanted to make sure and talk with you on the data. I guess Ed's got one more, but I think we can sort of bit back and use the rest of the pass here, aside from your scurrying around, we can use the air-to-ground just to answer any questions either on technique or hardware or whatever you've got remaining.

SL-11 MC-598/2

Time: 13:06 CDT, 13:17:06 GMT
6/6/73

CC One thing for you, Pete. The folks down here have looked at the optimal place to put vice grips on a flange for the PCU, and recommend right above the red 1 low flow. That gives you no obstruction on the controls and also from our standpoint, gives you no obstruction while you're moving around EVA.

SC Joe and I figured we'd put them on the blue hose.

CC Okay. We really didn't have any use for the those vice grips out there, Pete. We figured they were just a pretty generally useful tool and that's the only reason we included them on the list.

SC Yeah. We agree.

SC (garble)

SC He says to tell you that's his tether bag.

CC I'll tell you what, Joe. I spoke just a bit to early. INCO is back on the dump VTR, so hold on if you want to show us something.

SC Okay.

SC How long did it take you to put - -

CC Okay. As part of the prep here (static) we've got is mounting the - -

SC (Inaudible)

CC Say again.

CC Okay, Skylab. We're back in contact now through MILA. The Texas antenna had a little runin with a thunder storm last night and isn't tracking too well today. Paul, you were asking some question there right at the end, would you go ahead.

SC Been so long ago, I forgot.

SC Hi, down there. It looks like a nice day.

CC Yeah. It got kind of bad, last night though. Anybody up by the ATM C&D?

SC Negative.

CC Okay. We're in no rush for this, but when somebody gets a chance up there, we'd like to read out during a daylight side, that's when we've got the sun up, REG volts and amps, BAT volts and amps, and BAT temp on CERM 17. You can call down for a reminder on that, if you'd like, later.

SC Okay. I'll get it for you in just a few minutes.

CC Okay. There's no big rush on that. One other comment on the preps. We've looked at the TV - setting up the TV down here for the EVA. And what we're

SL-II NC-598/3

Time: 13:06 CDT, 13:17:06 GMT

6/6/73

recommending is mounting a monitor on the top of the TV camera with the screen facing the lens. That is, say you're looking at the screen and the lens. That way, I think the screen will be out of the sunlight when you're facing the back toward the paraxol. And it looks to us as though you can mount the universal bracket on either left or right shoe, whichever seems to be the most convenient for you. And on X Y Z settings, we don't have any. It looks like you guys are going to be the best judge of where to point it. And for your information we are back on real time TV and we've got Joe working on his suit, there. And Pete, we've got your bag in view there. As a matter of fact, that's a lot more clever than we were in the water tank.

SC Oh, I remember what I was talking about. Prep time; what's the accounted? What we put in on this last night from starting - essentially gathering stuff up until we'd pretty much got it together, not counting the refinements that were made today, we've got about 10-man hours in it, we figured.

CC

Okay.

SC

Where's the hurricane?

cc

Stand by, Paul. We'll get that for

you.

SC

I thought it was now, Rusty. Never mind.

CC

It's still in the Pacific.

SC

Oh, the hurricane's in the Pacific, now?

CC

A Rose, by any other name.

SC

Yeah.

CC

Okay, Pete. We're seeing your vice grips, they're hooked on. Can you tip it down just a little bit? Okay. That's just exactly where we're recommending, right. And you can sort of lay it back right up against your chest, Pete. It keeps it from snagging.

CC

Paul, it looks like it's about 12 north and about 110 west, just a little bit east of that. Maybe 108 west.

SC

Okay. What do you want on CBRM 17?

CC

Okay. We'd like to have ah - -

END OF TAPE

SL-II 399/1

Time: 23 C.E. 1 17:13 GMT

6/6/71

CC That may be 108 watts.

SC Okay, what do you want on CBR 177

CC Okay, we'd like to have the reg vol

and amps, reg volts and amps, and bat temp.

SC Okay, reg volts is what apparently

our standard no good values of 22-1/2 volts, plus 5 amps.

CC Okay.

SC Bat volts is 36, 36, bat amps is p

bat temp is 52, 52.

CC Okay, we got it. Thanks PJ.

CC Okay, and Pote, one thing we'd like you

to do is think over what your situation is here and basically

what the task is - we'd like a recommendation from you

sometime say within the next 2 hours on - on what your

is and what you're recommending as far as going ahead

it for tomorrow or Friday.

SC All, listen Rusty there's no doubt in my mind that the sooner we get it done the better off we are because it's going to take us two or three days to recoup. We've just about had the place cleaned up and in shape and a nice routine going, and we just wiped that out and demolished the place again. Unstowed everything and - So I know we're going to be tired when we get done and I know we're going to have to put the vehicle back in some semblance of shape. And, of course, ya'll want to play with it a little bit if we - if we are successful. So we'll shoot for going tomorrow.

CC Okay. Understand that you feel that you're GO for tomorrow. We do have EVA prep for tonight, so if there is any difficulty in setting that up, just let us know.

SC No, Joe (garble getting into the suit, it's a piece of cake. We're - Paul's putting the changes in right in a manner that we can recover from the changes for the next EVA. And I just finished working that other bag and I'm going to go start the - continue with the work toward EVA until our time period ends. On EVA we'll go back to it tonight.

CC Okay, fine. The one pad we got to get up to you aside from the unavoidable changes between now and then, but the one we know we're going to send up to you is the procedures for the 82A, the 54, and the TV. And that'll be coming up on a pad and you can take a look at them. Those are the kind of thing where Paul would be reading EVI do this, EV2 do that.

SC Yes, well, let me just caution you. There is no doubt in my mind as you mentioned, that we could get bombed like we did in Gemini 11. And if we do

SL-11 MC599/2

Time: 13:23 CDT, 13:17:23 GMT

6/6/73

flailing around out there I'm sure that we can run out of gas pretty easy. So I think you'd better figure if we're unsuccessful in the first hour and a half, we're probably not going to get the job done, and I hope we haven't worn ourselves out to the point where we can't go ahead and do 82 with all other good things, but recognize that they are. In my mind, the the low priority. The difficult task is to do this beam and I'm afraid I - I'm probably not quite as optimistic about it as you guys are. Of course, you've done a lot more work on it than we have, but we'll give her a go tomorrow. I - I'm pretty sure we under - out the window. We're going back and smoke them over again and talk about it some more. And I think the biggest thing depends on Joe being able to get the pole hooked onto something. There's number 1 and 2 either cutting it or me cutting it or however that works. And I hope there isn't something else holding it besides that strap.

CC Yes, sir, those are all - those other things are all low priority, we recognize that. We're now in LOS and be picking you up at 36.

SC

(static)

PAO

This is Skylab Control; 17:27 Greenwich mean time. Loss of signal from the Mila tracking station. An 8 minute gap to a brief pass along the northeastern segment of the Vanguard tracking circle. Seven minutes total time at Vanguard and then there's a long dry spell of about an hour and 8 minutes before Goldstone. Again we missed Carnarvon and Guam all together on this rev. Number 331 - 333 I beg your pardon. Back in 8 minutes with Vanguard tracking ship. At 17:28, Skylab Control out.

END OF TAPE

SL-11 HC-600/1

Time: 13:34 CDT, 13:17:34 GMT
6/6/73

PAO This is Skylab Control; 17:35 Greenwich mean time. Acquisition of signal at Vanguard in about 40 seconds. The warbler here in the Control Room running a little bit late, at least in relation to the AOS clock. Seven minute pass here over Vanguard - Vanguard Tracking Ship.

CC Skylab, Houston. We're AOS over Vanguard for the next 7 minutes. Did you have another question for Rusty?

SC No, not right now. I got a couple of questions about the changes to the EVA checklist.

CC Roger.

SC Okay, on page 1.2-7 --

CC Go ahead.

SC -- I assume that the things in the pink bracket that are crossed out, we now do. Except the things that are not crossed out, which we cross out and don't do. Is that right?

CC The things that are crossed out in the pink brackets, you will do. Say again the last.

SC Never mind. I know what I said - that's what I mean.

CC I hope you did.

SC On page 1.2-1, could --

CC Stand by, Paul. On 1.2-7, the one that you do not do is the one in the middle pink bracket - Remove cap from ECS return dump, and stuff --

SC That's what I said. That was my last second part.

CC Ah, good. Thank you. Go ahead with the next page. What was it?

SC That's what I say. We do the ones that are crossed out, except for the ones that aren't crossed out, but we cross them out and then don't do them.

CC Yeah, we got you. Go ahead. What's the next page.

SC 1.2-1.

CC 1.2-1. Go ahead.

SC I assume I go to S1 and then add those other switches, the rate gyro, the fine Sun-sensor, to that block. Is that right? Under C&D panel config?

CC That's affirmative.

SC Okay, that brings me up to date. If I have any more questions, I'll ask you later.

CC Okay, we probably will have some modes ourselves coming up that we know of now, but we're trying to get them organized before we let you know.

SC Okay. And I would like someone to keep track of all these changes, so that we can go back through and take them out. Because I assume that after this

SL-II .C-60112

Time: 13:17:34 GMT

6/6/73

EVA, and before the normal (garble) EVA, we're going to delete all the changes. Right?

CC Not all of them, because we probably, if this works out, will be using the aft compartment. In fact, let me say a word about that. You just reminded me of something I did miss. We are planning to use the aft compartment here. However, we do anticipate that we will still have some leakage to it. We are setting limits on that, and just for your information, in case we see the workshop pressure coming down significantly, we may have to ask for you to get back in and close the aft compartment hatch. Now we do not anticipate that, but I just want to let you know that we are looking at the OWS pressure during the EVA.

SC Okay, now a counter proposal for that is - how about if we make a little flapper to go over the equalization valve inlet so that the pressure going up against the hatch from the inside will feel it, but that they ought to lift off, say, one little piece of gray tape from coming the other way.

CC Stand by just 1.

SC And we can make that out of cardboard or a piece of flat mosite out of the ESS or almost anything.

CC Stand by just 1.

SC Okay.

CC Okay, I assume, Paul, that you are talking about the check valves - not the equalization valve in the (garble).

SC I think so. I'm talking about the only two that we got access to from the inside.

CC Right. Stand by just 1.

CC Okay, if you can make them a flapper, rather than put tape directly across them, that sounds pretty good. The problem is that we will be raising the lock and forward - and aft compartment pressure after the crew gets in there, due to the PCUs flowing. And we did not want to put tape across it for fear we would end up locking those check valves from their normal relief function.

SC Yeah. What I mean is a piece of cardboard or mosite on there, taped loosely with tape so that it'll be seated with pressure - bigger pressure on the inside. But anything coming in on it ought to unseat it - you know, a couple of inches of water, or something like that.

CC Everybody here has got their thumb up. Sounds good. Go ahead.

SC Okay.

SL-11 MC-600/3

Time: 13:34 CDT, 13:17:34 GMT
6/6/73

CC Okay, Paul, if you still read, we would like to just let you know that we are not sure that it is, in fact, leakage through the check valves. We think that's probably the case, but it could be leakage elsewhere. And this will give us - if your little scheme works, it would give us a good check to see whether it is.

SC Okay. And, Rusty, we're going to keep working - We'll try and get everything - the important things done on the Flight Plan today. But we may drop some of these incidentals. I haven't really had a chance to look at it, but as you well know, you may be able to do it in an hour on the ground, but you've thrown a lot of changes at us, and we got a lot of reconfiguring to do here. And we're trying to think our way through it as we go and be a little bit slow, so that we don't back ourselves into a corner. Okay?

CC Yeah, no sweat.

CC And, Skylab, we're about 30 seconds from LOS. We won't have you again until Goldstone at 18:47 - till an hour.

SC Okay.

END OF TAPE

SL-II MC-601/1

Time: 13:44 CDT 13:17:44 GMT

6/6/73

CC

And for your information we will be doing a data dump on that Goldstone pass.

PAO

This is Skylab Control, 17:44, Greenwich mean time. LOS of signal through tracking ship Vanguard. Next station an hour and 2 minutes away, Goldstone. During the stateside pass, earlier in this revolution, the crew inquired about Hurricane Ava, and it's location. And during this next sweep along the western seaboard of North America and Mexico that they will have an opportunity to look a little farther west at this hurricane. A rare combination of events will allow Skylab astronauts to record wind sea surface conditions produced by the season's first hurricane, Ava. As a National Oceanic and Atmospheric Administration C130 research aircraft flies through the 120 miles per hour winds. The hurricane, which formed in the Pacific Ocean, west of Central America, is not directly under the Skylab spacecraft and there will not be enough time to permit a full scale Earth Resources pass today. A full scale pass requires an attitude change to point the EREP sensors at the surface of the Earth beneath the spacestation, but two factors will permit EREP data to be gathered for three separate scientific investigations without reorienting Skylab. The hurricane is located just a few hundred miles south of the place where the Sun is directly over the spacestation, so the EREP sensors directly opposite the Sun pointed solar telescope are very nearly pointed directly at the Earth. In addition, though the eye of the hurricane is several hundred miles to the southwest of ground track 49, the microwave radiometer scatterometer altimeter S193 is able to look nearly 300 miles to either side, while the S193 scans the ocean, Science Pilot Dr. Joseph Kerwin will make handheld photographs of the hurricane out of the window, using a 70 millimeter Hasselblad camera, with a 100 millimeter lens. The EREP operations today will last only 5 minutes, with the S193 turned on as Skylab crosses the southernmost point of Baja, California at 01:55:30 p. m. central daylight time, and the pass completed in the Pacific Ocean due west of the Panama Canal Zone at 02:00:30 p. m. Central daylight. Skylab spacestation will pass nearest to hurricane Ava, which is about 700 miles southwest of Acapulco at 01:58:20 p. m. central daylight. Duncan Ross, a NOAA researcher, who leads one of the three scientific teams interested in receiving data from the hurricane pass is aboard the C130 hurricane chaser. The aircraft, which took off from Ellington Air Force Base in Houston at nine this morning, assisted in complementary data acquisition yesterday for the fifth EREP

SL-11 MC-601/2

Time: 13:44 CDT 13:17:44 GMT

6/6/73

pass. The C130, which carries several scientific instruments including a laser profilometer to record the heights of waves, will land at Acapulco to refuel. The added weight of fuel provides increased stability, so the plane can fly into the eye of the hurricane. In addition to Mr. Ross of NOAA's Atlantic Oceanographic and Meteorological Laboratories in Miami, principal investigators using today's pass will include Dr. J.P. Hollinger of the U.S. Naval Research Laboratory in Washington, D.C., and Professor Willard J. Pearson of New York University. The three scientists and their supporting research teams are investigating the relationship between winds, clouds, waveheights, and other sea surface characteristics as part of the oceanographic studies made possible by the first manned Earth Resources laboratory in space. 17:49 Greenwich mean time. Fifty-seven minutes, almost an hour to next station pass, which will be Goldstone and hopefully we will have some eyeball descriptions of hurricane Ava as Skylab space station sweeps down the western coast of Mexico and South America on revolution 334, the end of 333 and the beginning of 334. 17:49 Zulu, this is Skylab Control out.

END OF TAPE

SL-11 MC602/1

Time: 14:42 CDT, 13:18:42 GMT

6/6/73

PAO This is Skylab Control; 18:41 Greenwich mean time. Still about 5 minutes away from acquisition on stateside pass and possible sighting of Hurricane Ava off shore from Acapulco, Mexico. At 2:30 p.m. central daylight time this afternoon, Skylab backup commander, Rusty Schweickart, will conduct a briefing for news persons on EVA procedures, running over the EVA schedule for tomorrow. To repeat again: that's at 2:30 p.m., Houston News Room, small briefing room. Rusty Schweickart, backup commander, will go over the EVA procedures that have been worked out and discussed with the crew by Schweickart during the day today. Back again in 4 minutes for Goldstone-Texas pass, the final stateside pass of the day. Skylab Control out.

END OF T:PE

SL-II MC-603/1

Time: 14:45 CDT, 13:18:45 GMT
6/6/73

PAO This is Skylab Control, 18:45 Greenwich mean time. A minute and a half away from acquisition at Goldstone according to the AOS clock at any rate. 2:30 p.m. Central Time, Rusty Schweickart who is Skylab backup commander will hold a briefing on EVA procedures in the Houston newsroom. Standing by to confirm acquisition of final Goldstone pass of the afternoon. We do have acquisition at Goldstone.

CC Skylab, Houston. We are AOS over the states for the next 13 minutes. For the next 13 minutes.

SC Roger, Houston.

SC Is that, Houston, CDR out keeping 10 alfas in work.

CC Roger.

CC And by the way, guys, we are doing a data dump on the recorder this time.

SC Okay.

SC Okay, Houston. We just want to verify you do want the amplified pictures of the wardroom window and not the 190 windows, that right?

CC That's affirmative.

SC Okay.

SC Very well I'm going to take two and try and get stereo. That (garble)?

CC Skylab, Houston. I missed your last second.

SC Alright, sorry Houston, I was talking to the rest of the crew.

CC Oh, sorry about that.

END OF TAPE

SL-11 NC-604/1

Time: 14:53 CDT, 13:10:53 GMT

6/6/73

PLT - enormous spiral, Houston. It covers the whole window. We won't be able to get it all on (garble)

CC I understand the spiral covers the whole window.

PLT And it has a small, very well defined (garble) eye. It's like an artist's conception of a hurricane.

CC Rog. I understand a well defined eye.

PLT Earlier, you sent me your readings. Alfa 9 is oscillating between 5 percent and 45 percent. Bravo 9 is hanging in there at about 58. Then Charlie 9 is oscillating between 50 and 90. Now Alfa 9, even though it's oscillating, stays at the lower end most of the time. And Charlie 9 stays at the upper end.

CC Roger. Copy, Paul.

PLT Houston, we're not getting any of the clouds associated with a hurricane on the RAD/SCAT. I think we're over open water right now at the beta just on the very end of it.

CC Okay, we copy.

CDR The eye in that thing is fantastic to look at - it's completely almost open in the middle of it.

CC Roger.

CDR And you can see blue water in the center of it and it must have a straight row of clouds that goes clear up to 35,000 or 30,000 feet right on the sides of it.

CC Skylab, Houston. We're 1 minute until LOS. We won't have you again until 19:13. 19:13.

PLT All right.

PAO This is Skylab Control 19:00 Greenwich mean time, loss of signal through Texas. As the Skylab space station overflew Hurricane Ava. As the crew spotted it from the space station window they reported that it was an enormous spiral that fills the whole window, but it had a small well defined eye. Pete Conrad came on the squawk box and said that the eye was open enough to where you could see water all the way through the eye with walls of clouds extending up around the perimeter of the hurricane's eye from 30 to 35,000 feet in altitude was his estimate. Eleven minutes to acquisition of signal at tracking station - tracking ship Vanguard. And shortly after Vanguard, a loss of signal at 2:30 central time. Skylab backup Commander, Rusty Schweickart, will meet with news persons in the Houston news room to conduct a briefing on tomorrow's EVA - how it will be done - what tools will be used and will include a replay of - a video tape made of Rusty and Ed Gibson in the neutral buoyancy simulator at Marshall Space Flight Center two or three days ago as he worked out procedures, checked the feasibility of tomorrow's EVA. Back again in 10 minutes for Vanguard. At 19:02, Skylab Control, out.

END OF TAPE

SL-11 MC-605/1

Time: 15:10 CDT, 13:19:10 GMT
6/6/73

PAO This is Skylab Control 19:10 Greenwich mean time. 2 minutes away from acquisition at Vanguard, tracking ship Vanguard. Seven and a half minutes acquisition time across Vanguard on this 334th Earth revolution. Next station after Vanguard will be Hawaii in about an hour and 3 minutes after Vanguard LOS. Meantime Skylab backup commander Rusty Schweickart will conduct a briefing in the Houston newsroom on tomorrow's EVA at 2:30 p.m. Central Daylight. Standing by now for - the tracking ship Vanguard pass and further conversation between Bob Crippen CAP COM and Skylab space station crew.

CC Skylab, Houston, we're AOS over Vanguard for the next 16 minutes.

CDR Roger, we must be going -

CC Sorry about that, wrong time on it - it's for the next 7 minutes - 7 minutes.

CDR Roger.

CDR Houston, we were hoping to get a good shot of Buenos Aires, but that unfortunately it is just barely under the edge of the clouds.

CC Roger.

CC Skylab, Houston, we're 1 minute until LOS and we won't see you again for about an hour at Hawaii at 20:21 - 20:21.

CDR Aloha.

CC Roger.

PAO This is Skylab Control, 19:21 Greenwich mean time. Lose of signal as the space station went over the horizon from tracking ship Vanguard on revolution 334, next station an hour from now, Hawaii. About 6 minutes from now at 2:30 Central Daylight Time, Skylab backup commander Rusty Schweickart will conduct a briefing on EVA procedures and equipment for tomorrow's EVA to deploy the Solar array panel on the side of the orbital workshop. The broadcast line will be taken down during that briefing and any station passes by Skylab will be recorded for delayed playback at the end of the press conference. 58 minutes away from Hawaii at 19:22 Greenwich mean time. Skylab control, out.

END OF TAPE

SL-11 MC-606/1

Time: 15:44 CDT, 13:20:44 GMT
6/6/73

PAO This is Skylab Control, Greenwich mean time 20 hours 44 minutes as the spacecraft concludes its 334th revolution. We are expecting acquisition over the Vanguard tracking station. During the press conference with Astronaut Rusty Schweickart we had approximately one and a half minutes of air-to-ground over the Hawaii station, during which time Cap Com, Bob Crippen discussed with the crew a telegram sent to the Mission Control Center by former Astronaut James Lovell, who congratulated Commander Conrad on beating his record. The telegram read: "Congratulations on beating my record. If you need help, I'll send a tugboat." This is Skylab Control at Greenwich mean time 20 hours 45 minutes. We'll run that tape from Hawaii now, and then hold up for Vanguard.

CDR

Go ahead.

CC

Okay. To conclude some of the problems

we've been having with the thing tripping off because of the detectors - at the conclusion of this pass we would like you to put the S055 MAIN HIGH VOLTAGE switch to OVERRIDE, and then if we ever get any - things trip out well you will get the light but the other detectors will keep running.

CDR

Did you say the high voltage from ENABLE?

CDR

There is what?

CC

And Pete, I've got a telegram here for you.

I might as well read right now. It reads: "Congratulations on beating my record. If you need assistance I'll send you a tugboat" Signed Jim Lovell.

CC

Skylab, Houston. We're one minute to LOS.

We'll have you again at Vanguard at 20:49, 20:49.

CDR

Roger, Houston.

CC

And Skylab, we will be doing a data dump for the recorders over Vanguard.

CDR

Okay, Houston and we just lost a Z-gyro.

CC

Understand. Lost a Z-gyro.

CDR

In redundancy management now.

CC

Okay.

CDR

Yes.

CDR

(Garble)

END OF TAPE

SL-II NC-607/1

Time: 15:47 CDT 13:20:47 GMT
6/6/73

CC
for the next -

CDR

CC

Pete.

CDR

again?

CC

it right now.

CDR

CC

Skylab, Houston. AOS over Vanguard
Hi there Houston. Are you there?
Rog. We're here for about the next 9 minutes,
Okay. When are Z CYROS? Change his mind
Apparently. We're taking a look at
Okay.
Skylab, Houston. Skylab, Houston. We
had an indicator problem with Z-1. We're going to put -
but it apparently is gone now, and we're gonna put 1 and 2
back in control, and we're gonna go ahead and turn on 3,
so we can have it as a backup. God damn it.

SPT

down there?

CC

SC

CC

PLT

(laughter) You having a few problems
Look who's talking. Rog.
(garble)
Say again.
Just wondered if you were there. They're
dumping the tape recorder. Take three numbers for me, Bob,
will you?

CC

PLT

Go ahead.
Okay, on the M171 on the SPT the
percent O2 is 72.10. 72.10. Percent water is 5.19, 5.19.
Percent CO2 is 1.92, 1.92.

CC

CC

Rog. Copy.
PLT, Houston. If you've got a minute
now, you can, well, cancel my light.

CC

And Skylab, Houston. We have sent
you some additional teleprinter pads regarding EVA. There
are two - Charlie two pages on it. The first is bad, dis-
regard.

CDR

CC

Okay.
Skylab, Houston. We're 1 minute til
LOS. We'll see you again at Hawaii at 21:57, 21:57. We
have reconfigured the RATE CYROS.

CC

Skylab, Houston. I don't know if you heard
my LOS call, but we're going LOS now, and we'll have you again at
Hawaii at 21:57, 21:57, and we have reconfigured the RATE
CYROS with 1 and 2, and we haven't got 3 up to speed
yet. We'll get that over Hawaii.

SC

PAO

Okay. Fine.
This is Skylab Control, Greenwich mean
time 20 hours and 59 minutes. On the previous pass over
Vanguard Capcom Bob Crippen discussed with the ground that the
problem with the RATE GYRO has - looks okay now. They put

SL-II MC-607/2

Time: 15:47 CDT 13:20:47 GMT
6/6/73

one and two back on line and will use number 3 as a backup. There are three gyros in each axis. The CMC, the control moment gyros subsystems provide three-axis attitude control. There are nine RATE CYROS total in the vehicle. The discussion earlier over Hawaii was concerning the fact that Commander Pete Conrad had surpassed astronaut - former Astronaut Jim Lovell's record of 750 hours and 5 minutes in space. Commander Conrad beat that record on June 3, at 12:17 a. m. central daylight time. Conrad now has four missions under his belt. Former Astronaut Lovell had four, Gemini 7, Gemini 12, Apollo 8, and Apollo 13. Next acquisition will be over the Hawaii tracking station in 56 minutes. At Greenwich mean time 21 hours, this is Skylab Control.

END OF TAPE

SL-II MC-608/1

Time: 16:55 CDT, 13:21:55 GMT

6/6/73

PAO This is Skylab Control, Greenwich mean time 21 hours 55 minutes. We anticipate acquisition of signal over the Hawaii tracking station as the Skylab crew is scheduled to start EVA preparations this evening for an hour and a half for Thursday morning's scheduled EVA to repair the solar panel on the orbital workshop. We'll hold the line up live for Cap Com Bob Crippen.

CC Skylab, Houston. We're AOS over Hawaii for the next five minutes.

SC Roger.

CDR I looked at those TV sketchy procedures and I don't like them. I have the feeling that I would prefer right now not even to mess with the TV, and if we try and do anything at all it's got a camera outside. Maybe the 16 DAC or something we're used to handling out there.

CC We've got Rusty standing by here, maybe I can let him comment on that.

CDR Okay.

SCHWEICKART That's what you call passing the buck.

CDR Well, I got to be honest with you Rusty, I don't like them. You're asking us to go back in and hook up the camera with the wires not hooked up and then you want to send the thing out on the boom and get the wire and that wire is just terrible. We have a hard time messing around (garble) that stuff in here. And I just think we're asking for trouble. We're liable to lose the one TV camera we got left.

SCHWEICKART Okay, Pete. Let me tell you one reason why that was requested by NASA. Hold on just a second.

CDR I know it gets the data to you the fastest but - -

SCHWEICKART Stand by, Pete. We'll (garble)

CDR - I really don't like it.

CC CDR, Houston. Apparently we've - the star's drifted off and we'd like to see if we could reacquire that. Let me see if I can get them to give you some good gimbal angle for right now.

CC And Skylab, Houston, I did have some comments. We are sending up your flight plans for tomorrow. You'll notice - well it's not obvious in this one, but we are planning on a couple of ATM passes in the pre-sleep. In fact the plan is there now. Now, those ATM passes are going to be kind of at your option. If you can't - don't feel like you can do them well, we'll go ahead and do unattended OPS.

CDR What's this? Tomorrow night?

CC That's affirm.

CDR Okay.

CC Also, I guess I'd like to - if you can copy

SL-11 MC-608/2

Time: 16:55 CDT, 13:21:55 GMT
6/6/73

down. I had a couple of items here for pad modifications that we have sent you today.

CDR Go ahead.

CC Okay, pad number 1317 Alpha, deals with setting up the ATM the C&D for unattended operations post-EVA. We would like you to add to that to set CANISTER ROLL to plus 5400, that's plus 5400.

CDR Okay.

CC Okay, and also, just as a verbal reminder, in the C&D setup for EVA prep it has you make sure that all the doors are closed. We do not want to close the S054 door which is probably obvious to you.

CDR Yeah.

CC Okey doke.

SPT Hey, Crip?

CC Go.

SPT That's 154 item roll was in the post-EVA panel reconfiguration for unattended OPS, is that right?

CC That's affirmative.

SPT Okay.

SPT Go ahead with the star tracker pad

CC Okay. The star tracker gimbal angles we'd like you to put in are: INNER GIMBAL ANGLE a plus 0029, and OUTER a plus 1481.

SPT That's still friendly Achernar?

CC Yeah, that's affirmative.

MCC And Pete, let me say just one thing on the rationale here, and there's no question. If it looks like when you get to do it, that that cord is too hard to handle or whatever, we - use your own judgement on it. The rationale behind it rather than a DAC is that with the TV down-link we can get an assessment with the color quality of the what the sail is doing and thereby make a better decision of whether to put out another sail before you all come back. Whereas with the DAC we'd have to bring it back with us.

CDR How much of it do you have to see, Rusty? I can give you color TV of the sail from the command module window. Of the orange.

SCHWEICKART Okay, let me pass that on up, Pete. That's all I can tell you right now. I'll take that higher and find out what recommendation is.

CDR Okay. Man oh man, I tell we've been - we're slowly getting behind the curve on tomorrow because we're trying to rig the airlock now, and boy try to stick a TV camera in here with all that wiring and we got gray tape all over everywhere and I'm not convinced half of it is going to work, but we'll give her a go.

SL-II MC-608/3

Time: 16:55 CDT, 13:21:55 GMT
6/6/73

SCHWEICKART Okay, look, as far as I'm concerned, if there's any question whether it's going to work that's low priority. Forget it.

CC We're just about to go LOS and I'll have you at 28, 28.

PAO This is Skylab Control, Greenwich mean time 22 hours 7 minutes. On the previous pass over the Hawaii tracking station Commander Pete Conrad requested the ground reconsider instructions to deploy the TV camera tomorrow during the EVA. He questioned the - he didn't like the procedures and he said he felt more comfortable using the 16 millimeter DAC camera. Next acquisition will be over the Vanguard tracking station in 20 minutes. This is Skylab Control at 22 hours and seven minutes.

END OF TAPE

SL-11 MC-609/1

Time: 17:26 CDT, 13:22:26 GMT

6/6/73

PAO This is Skylab Control, Greenwich mean time 22 hours and 26 minutes. We have ac - we will have acquisition at the Vanguard tracking station momentarily. The crew should be well into their evening pre-preparations for tomorrow morning's scheduled EVA. Science Pilot Joseph Kerwin should have concluded an M092 M171 run, that's the metabolic analyzer experiment, M171 and the lower body negative pressure device M092. Will leave the line up for conversation between CAP COMM Bob Crippen and the Skylab crew over Vanguard.

CC Skylab, Houston, we're AOS over the Vanguard for the next 8 minutes and we will be doing a recorder dump.

CDR Roger, Bob.

CC And, Joe if you're listening some good news for today, the medics have decided to insure that you get a good nights sleep - that you can scrub M133 for tonight.

SC He says, "Yeah. Thank you."

CC He's trading that for some water gun readings we're going to ask you for later.

SPT Okay.

CC CDR, this is Houston.

CDR Go ahead.

CC Okay, we want to - we were discussing here want to make clear the position on this TV thing so that you don't have anything hanging over your head. We'd like to make sure you understand that that's extremely low priority on that EVA, that the whole job is to get that SAS wing up and if for whatever reason you decide not to take that thing out there to look at the parasol or anything else, that's just great, forget it. On the other hand, if it's back there in the aft compartment and you get done in time and you feel like trying it, that'd be swinging. If on the other hand, tonight in setting up lock compartment, air lock stowage, you decide it's too - too big a mess to stow forget it tonight and it's gone. We got - we want no pressure on you on it.

CDR Well, Rusty, my feeling that the it's gone now because I don't want to mess with it for the following reasons. We've decided not to handle the TV during the EVA because it was such a mess to handle. Now you're asking us to handle the thing when we've never tried it before. And I feel e'll lose the camera, screw it up or do something wrong.

CC Okay, it's gone.

CDR Atta boy, now you're talking.
(garble) I don't even want to mess with it. We're configuring the EVA right now and we've only got one camera, we've never

SL-11 MC-609/2

Time: 17:26 CDT, 13:22:26 GMT

6/6/73

messed with it. That cable's a bear and I just think we're a lot better off not messing with it at all. I'll give you some TV at the command module window of the orange and hopefully fully zoomed in you can get a good color comparison.

CC Okay, fine. Quit talking about it, it's gone.

CDR Now I can go back to work.

CC We just want to let you know, we probably will not send up a revised pad. As you're going through them just delete all references to it unless you want us to send up another pad with all that stuff deleted to make it clean. Your choice.

SPT We'll leave it go like she is.

PAO This is Skylab, Houston, we just sent you up another teleprinter pad which is a slight mod to your EVA Checklist.

CDR Very good.

END OF TAPE

SL-11 MC-610/1

Time: 17:32 CDT 13:22:32 GMT
6/6/73

CC Skylab, Houston. We're 1 minute til
LOS. We'll see you again at Hawaii at 23:35, 23:35.

SPT Okay, Crip. I got a question on this
last change to the EVA checklist that was sent up. For ex-
ample, we're just added opening the ILCA gears and turning
the ATM coolant pumps off. Then I remember - How we gonna take
care of closing those breakers and turning those pumps back
on?

CC Okay, we've got the coolant pump covered
to turn it back on, as you'll see and I guess we're gonna
give you a GO on that ILCA heater, depending on what our
power status is.

SPT Oh, yeah, I should have seen that. I
didn't read far enough, okay. All righty.

PAO This is Skylab Control. Greenwich mean
time 22 hours and 37 minutes. We have loss of signal at the
Vanguard tracking station. Capcom Bob Crippen advised Science
Pilot Joseph Kerwin that he would not have to don the sleep
monitoring cap, the M133 experiment this evening. Commander
Conrad asked the ground and received permission to not use
the TV camera tomorrow to take pictures of the deployed
parasol. The ground is concerned about the color of the
parasol, and Commander Conrad said he could use the TV
through the Command Module window to give them pictures of
the parasol. Next acquisition will be Hawaii in 57 minutes
from now. This is Skylab Control at 22 hours 38 minutes.

END OF TAPE

SL-11 NC-611/1
Time: 18:33 CDV 13:23:33 GMT
6/2/73

PAO This is Skylab Control, Greenwich mean time 23 hours 33 minutes. We anticipate acquisition of signal over the Hawaii tracking station with Capcom astronaut Hank Hartsfield.

CC Skylab, Houston, through Hawaii 6-1/2 minutes.

CDR Hello there Hank. How are you tonight?

CC Oh, pretty good. How did it go today?

CDR Well, we've got it all done so far, we're gonna make the ATM pass. And Joe and I are doing as much EV prep for tomorrow as we can do tonight, right now.

CC Okay, I guess sometime before the evening's over, we'd like to tag up on just how far you got, and where you think you're gonna pick up tomorrow morning.

CDR Oh, I'd say right now, Hank, we've got the suits to the donning stage, the PCU's are out, because that was gear that was basically moved around with some other stuff and it was easy to do today while we were doing some other things. We're just picking up the cue cards now, and I think that we'll be in good position at about 1 - 02:00 or so to tell you where we are on the cue cards.

CC Okay, good show.

CC Skylab, Houston. For info, we're commanding the GYROS into the sleep configuration.

CDR What happened to that Z GYRO today? compensation go off again?

CC It was a momentary hard-over.

CDR That's interesting. We just give the cluster (garble) a couple of good healthy (garble) down in the TACs.

CC Roger.

CC Our data showed we got three firings.

CDR Yeah, that's what they got down here. They got it around M092 (garble) Any explanation for the momentary hard-over?

CC I guess we can't answer that, Pete. Everybody down here is baffled by it. It's the second time it's happened. And the GYRO seems perfectly normal now and we got it back on the line.

CDR Same GYRO.

PLT Hey, Hank, I got a question for you about general message 1326, which is the EVA procedures, tail end.

CC Okay.

PLT We have two Charlie 2s and two Charlie 3s. Grip mentioned this before, but I didn't have the message to look at then. The second Charlie 2 and the second Charlie 3 replace the first ones respectively.

SL-11 MC-611/2

Time: 18:33 CDT 13:23:33 GMT

6/6/73

Is that right?

MCC Hey, we're going over that right now.
We'll get back with you.

PLT Oh, you mean I shouldn't do too much
cutting and pasting yet, huh?

MCC Okay, the last Charlie 2 and the
last Charlie 3, the last two messages you got are
valid. You may press on with cutting and pasting.

PLT Okay, thank you, sir.

CC And Skylab, Houston. Info on your
evening questions are in the teleprinter.

CDR Roger.

CC Skylab, Houston. We're about 1 minute
til LOS. We'll be coming up on Vanguard at 06.

PAO This is Skylab Control at Greenwich
mean time 23 hours 42 minutes. We have loss of signal over
the Hawaii tracking station. And on this pass Capcom Hank
Hartfield and astronaut Rusty Schweickart discussed with
the crew the last procedure that they're going through
tonight prior to sleep period, preparing for the EVA to-
morrow morning. Pilot Paul Weitz was questioning, when he
used the phrase LC, LC2, he's referring to changes which
went up on the teleprinter concerning EVA procedures for
tomorrow. On it's 336th revolution of the Earth, Skylab
will be - have acquisition over the Vanguard tracking
station in approximately 22 minutes. Greenwich mean time
23 hours 43 minutes, this is Skylab Control.

END OF TAPE

SL-11 MC-612/1

Time: 18:45 CDT, 13:23:45 GMT

6/6/73

FAC

This is Skylab Control, Greenwich mean time 23 hours 45 minutes. We anticipate a Change-of-shift briefing in the building 1 news room in 15 minutes from now 7:00 p.m. central daylight time, with Milt Windler, Flight Director of the maroon shift. Here at Mission Control Center, Neil Hutchinson and his silver team has taken over from the maroon team. At Greenwich mean time, 23 hours 45 minutes, this is Skylab Control.

END OF TAPE

SL-11 NC-613/1

Time: 19:32 CDT, 14:00:32 GMT
6/6/73

PAO This is Skylab Control 00:32 minutes Greenwich mean time. During the Change-of-shift briefing with Flight Director Milt Windler, we had two successive passes over Vanguard and Ascension. We will play that tape now. Discussions were passed up to the crew concerning displays on the ground now show that CBRM 17 is showing proper amps. And indications are this CBRM is now safely back on line. We'll bring up those two passes now. Our next live pass will be in 31 minutes over Guam.

CC

Skylab, Houston through Vanguard 10 minutes.
Roger, are you ready for the evening status

PLT

report?

CC

Stand by and let's see if they are ready to copy. We had it scheduled for the next Vanguard, but let's see if they're ready.

PLT

Okay, if you're not, no sweat, we'll give it to you then. If you're ready we got her.

CC

Okay, we're ready to copy now.

PLT

Stand by.

CC

While we're standing by you might be interested to know that Ava's got winds up to 130 knots now.

PLT

Phew.

PLT

Okay it's (garble) pick up here, Henry. All I (garble) on the food. The SPT ate everything. He's only had one extra can of butter cookies. CDR ate everything. The PLT ate everything except one item -- 75, bread, and a gallon of water and minus one, optional salt 1.5. Okay the only pictures we took today were some Hasselblad pictures and that's (garble) C. No deviations from the flight plan that you don't know about and no stowage changes.

PLT

Got everything you wanted?

CC

Stand by.

CC

Okay, I guess that about does it for the status report. The only other open item now is the questions which we sent up to you awhile ago.

CC

And PLT, I've got some gimbal alignments for you for the star tracker.

PLT

Okay, go ahead.

CC

Okay, OUTER is a plus 1442, INNER plus 0032.

PLT

Okay, I understand the INNER is plus 0032, the OUTER is plus 1442.

CC

Affirmative.

PLT

When does that start, Henry?

PLT

Is this the same as on the original pad day 38 it starts?

CC

Apparently the original pad and I guess you can bring it up at sunrise. We're in a dump now.

SL-11 MC-613/2

Time: 19:32 CDT, 14:00:32 GMT
6/6/73

PLT Yeah.
CDR Have we still got you, Hank?
CC That's affirmative. A couple of more min-
utes.
CDR I'll give you 3156 stuff you asked for.
CDR Ready to copy?
CC Go ahead.
SC Hello.
CDR Okay, Alfa, CDR 200, SPT 130, PLT 340.
Bravo: CDR 3886, SPT 7182, PLT 3261. Charlie: CDR 6106,
6103, 6107; SPT 6656 6654 6647; PLT 6829 6831 6823. Delta:
CDR 2/15/15 - -

END OF TAPE

SL-II MC-614/1

Time: 19:37 CDT, 14:00:37 GMT

6/6/73

CDR 10, 96231, 6828 Delta CDR 2/15/150C
SPT 2/15/2250 PLT 2/16/2600 1/04/0200 Echo CDR, none; SPT,
none; PLT, none. That's it.

CC Roger, thank you. We're about 35
seconds from LOS. We'll be coming up at Ascension at 21 for
the recorder dump.

CDR Bye.

PAO Skylab, Houston to Ascension 7-1/2
minutes. Skylab, Houston to Ascension 7 minutes.

CDR Are you ready for the questions?

CC Go ahead.

CDR No. 2 is yes, no. 3 we'll have to give
you later. No. 4 is 22 volt read - 22 volt reading on reg 17
and the answer I was reading (garble) what kind of line a
week or so ago. You're still confusing him with big
words. The answer to five is yes.

CC We won a bet on no. 2.

CDR Who won?

CC The friendly CAPCOM and flight director
won, and PAO lost.

CC PLT, Houston?

PLT What do you want?

CC Roger. The PLT, before you leave the
ATM tonight we'd like for him to get the reg volts and the
reg current on CBRM 1. The reason we want this is to make
sure that your own volt meters are giving you the right
readings.

PLT All right. Stand by and we'll see now.

PLT Okay, Henry. CBRM 17 regulator is
reading 30 volts now. Hello, Houston, you there?

CC Roger, we're just talking about that,
that thing seems to work all right. After ten or fifteen
minutes of night time, it seems to come up to speed and do
its job and in the day time it just flat puts out a couple -
about half of what it's supposed to (garble).

PLT Okay, I'll try to remember to work
(garble) day passes to see how it works then. Yeah, it's
right up (garble) all of them, all but 15 are (garble) now.

CC Roger. Skylab, we're about 1 minute
from LOS, Guam will be coming up at 05.

CDR Hey, Henry, I want you to think about
us not inhibiting TACS tonight, I (garble) the gyro what
would happen had it happened with the TACS off. Okay?
Think about it.

CC Okay, we have a story for that. I
think we have it all planned out, we'll tell you next time.

CDR Make it a good one.

SL-II-16-614/2

Time: 19:37 CDT, 14:00:37 GMT

6/6/73

PAO This is Skylab Control 0041 minutes.
We've had loss of signal over Ascension. The spacecraft
crosses over the Persian Gulf on its 337th revolution, we'll
have acquisition over Gu- Guam Island tracking station in
23 minutes. This is Skylab Control at 00:41 minutes.

END OF TAPE

SL-11 MC-613/1

Time: 20:04 CDT 14:01:04 GMT

6/6/73

PAO Skylab Control 1 hour 4 minutes
Greenwich mean time. We expect acquisition of Skylab
over the Guam Island tracking station.

CC Skylab, Houston through Guam 6 minutes.

CDR Roger.

CDR Hey, Hank, I got a little confusion
here. Where did you want me to get the 9082A film from?

CC Stand by.

CDR And then what do you want us to do?
Load it in our cans?

CC While we're smoking that over, Pete,
I'll give you an answer on that TACS thing. The (garble)
we had two previous hard-overs on the 21. One was on day
154 and one was day 157, which is today, I guess, and we -
the reason we want TACS inhibited is that if the thing does
its hard-over, then ATMDC puts it in command and it'll
fire the TACS right off the bat and start moving the
vehicle out, then the (garble), bringing up 2-3, and when
it gets it on the line, it'll decide that one is the bumper
and then it'll fire or do whatever it is to get it back. If
we have it inhibited, the vehicle stays where it is, or if
the CMGs start moving - but we think that - we're pretty
sure that it will recognize that the failure and everything
will be under control before we get into CMG SAT and we
won't be wasting any TACS.

CDR Okay, I'll buy it.

SPT Hey, Hank, this is the SPT. How is
RATE CYRO 3 in C? Is it good? Because if it is, why don't
we go 2-3 and 3-1?

CC Stand by a minute.

SPT Yeah, but if we went 3-1, and we got
a discomparate, it'd go 3.

CC Okay, and in case you started there
Joe, they tell me that it will pick the lowest number CYRO,
so it would go to 1.

SPT No, I don't think that's true. But
they're smarter than I am. Then of course if we went 2 and 3
we could stay away from 1 completely.

CDR Hey, Hank. Where are we right now?

CC Okay, you're over Guam.

CDR Okay.

CC Our plan is to go 2-3, but, we're, I
guess trying to get some data on 3.

SPT Okay.

CC That's the reason we want to get the
star-tracker up tonight, so we can calibrate 3, and then
tomorrow, I guess, we're planning to go 2-3.

SL-II MC-615/2

Time: 20:04 CDT 14:01:04 GMT

6/6/73

SCHWEICKART CDR, Houston.
CDR Go ahead.
MCC Yeah, Pete, message 1316 Alfa calls
out load number 2 out of film vault 141, M141.
CDR Okay, very good. Paul put all our
checklist changes in, and I didn't want to have to go
back through all of the messages.
MCC Okay.
CDR Well, we've passed page 1 of the EVA
prep card except for doing the wetting of the visors. And
we're configuring LSUs and that sort of stuff now.
MCC Okay.
CC Skylab, Houston. For your info, we got
a general message 1414 on board. It's a systems reconfigu-
ration that has to be accomplished prior to the EVA. I suggest
if you get time you might hit it tonight, and save a little
time tomorrow.
CDR Okay, we sure hope this is the last
reconfiguration we get before tomorrow morning.
CC Okay, it's just a short one. It's
doing something with the REG adjust pots and on the
recharge station.
PLT That's what Pete said.
CDR You got 500 guys down there keeping
three of us busy.
CC Skylab, Houston. We're about 1 minute
from LOS. Since we've already got the evening status
report out of the way, we got some news, if you want to
hear it at Vanguard, which is coming up at 43, and also
we're showing that TACS is still ENABLED.
PLT Okay, we were waiting for the discussion
before we inhibited it. See if the CDR liked that or not.
CC Roger. Copy.
PLT How is that?
CC That's the only way.
PAO This is Skylab Control. Greenwich
mean time 1 hour 12 minutes. As the spacecraft passed
over the Guam tracking station, Commander Conrad requested
information from the ground as to where he would get the
film for transfer tomorrow into the S082 experiment in the
Apollo telescope mount. This is one of the activities
scheduled during tomorrow's extravehicular activity out-
side the building - outside the vehicle, excuse me. Next
pass will be over Vanguard 30 minutes from now. Skylab
Control, Greenwich mean time 1 hour 12 minutes.

END OF TAPE

SL-11 MC-616/1

Time: 20:41 CDT, 14:01:41 GMT
6/6/73

PAO This is Skylab Control, Greenwich mean time 1 hour 41 minutes. As the Skylab space station completes it's 337th revolution as it nears the Vanguard tracking station. We expect CapCom Hank Hartsfield to read up the evening news to the crew as the Skylab space station will start its 338th revolution.

CC Skylab, Houston through Vanguard for 11 minutes.

PLT Hi there.

CC And so you don't get confused we goofed up and sent you page 1 of the flight plan twice.

PLT Say again what you did?

CC Okay, we sent page 1 of the flight plan twice.

CC (Garble) Belay that. We didn't send it twice we just put it in the wrong order.

PLT You're forgiven.

PLT Okay,, Houston, if you want a status report on where we are, we're about to open the hatch. We figured to have the EVA wrapped up in about an hour and a half.

CC A few people got up on that one.

PLT (Laughter)

MCC I'm glad I stayed awake.

PLT No, seriously, we are at the place on page 3 on the cue card where it says OBM's and LCG knotting, so we're going to pretty much wind it up there. We're going to smoke through the rest of it and see if there's any little details we could catch up on. And go through the EVA plan one more time and eat our ice cream and strawberries.

MCC Sounds like preflight.

PLT Hey, Rusty, I can't find that (garble). I remember seeing it that has the S082 dope on it. Is there anything else of interest on that one?

MCC Stand by.

SCHWEICKART Yes, PJ, it does have some other things on it. Stand by just 1.

PLT Okay.

CDR You know me, Rusty. I like to get things done early and not work late.

CDR It's like the night before Christmas up here. The suits are hung by the fireplace with their LSU's in place just waiting to go.

MCC Okay, Skylab. I'll tell you what. It's not too long a message, but it does have some other things on it that deal with the prep and what we think we'll do here is retransmit it to you here over Ascension which is coming up in about 15 minutes.

SL-II MC-616/2

Time: 20:41 CDT, 14:01:41 GMT

6/6/73

CDR

What's the message numbers, Rusty?

SCHWEICKART

It's 1316 Alfa and aside from what we already talked up, Pete, most of it deals with Post and I think the only thing in (garble) is getting the right film magazine out of 141 there.

CDR

And I got it (garble) and it's ready to go.

END OF TAPE

SL-II MC-617/1

Time: 20:47 CDT, 14:01:47 GMT
6/6/73

CC Skylab, Houston, we need a few things
cleaned up on the ATM panel.

CDR Shoot.

CC Okay, we need to get the H-alfa
camera OFF, and close the doors on H alfa 1 and 2, and the
S036 door CLOSED, and MPC INHIBIT.

CDR Okay, I was seeing how many of those you'd
pick up. You did pretty good.

CC And - -

CDR I think we've got a bat charge light.

CC The star trackers kicked off again and
we're getting some angles for you now. We need to reacquire.

CDR How come I have a bat charge light,
Houston?

CC Okay, star tracker angles are OUTER
1500, INNER is 0035. A- the bat charge light on CBRM 13 is
no sweat; we just had the heaters on during the dark period
there.

CDR Hey, how come the heaters on the
night side made the bat charge light come on then?

CC I'll get an answer.

CDR (garble)

CC Okay, what happened there was the
heaters were on during the day light so the bat didn't get
completely charged.

CDR Okay. How much of a sweat is it,
for power tomorrow on EVA?

CDR Or to put it another way, I'd like a
briefing. I don't want to be hanging half way out the hatch
and have PJ start talking about battery chargers and PCG and
this that and the other thing without understanding what's going
on. Okay?

CC Okay. The EVA power down we sent you
up there - the things we're going to command off, total 1106
watts and we calculate for the EVA, you'll need 1012 watts
and that includes the VTR which we're scrubbing, so we
think we've got a real good margin.

CDR Okay. I won't scrub the VTR, you
know. You'd be surprised how much you can see from the inside.
And I think we'll put the camera up here and PJ can really give
you a good shot of Joe standing out there because that's the
wide open from this STS window.

CC Okay, we - that's a good idea, we got
the - the VTR schedule in that 1012 watts and we're about
LOS now, Pete. Vanguard will be coming up in - correction
Ascension coming up in 56 and that will be your med conference.

CDR Okay, see you later.

END CF TAPE

SL-II MC-618/1

Time: 20:55 CDT, 14:01:55 GMT
6/6/73

PAO This is Skylab Control, Greenwich mean time one hour 55 minutes. On the previous pass across Vanguard tracking station Science Pilot Kerwin jokingly told the ground we're about ready to open the hatch and we should have the EVA over in about an hour and a half. His comments were addressed to the fact that the crew is that well ahead on the EVA preparations for tomorrow morning. When that remark came down from Skylab space station, several of the flight controllers here in the Mission Control Center stood up and looked around quite surprised. Commander Conrad mentioned that they were ready with their equipment for tomorrow morning. He said the LSU's are by the fireplace ready to go. The LSU is the Life Support Umbilical which is a 60-foot long umbilical cord that the crew - through which the crew will receive their oxygen and water supply for their liquid cooled garment that they wear underneath their Apollo-type pressure suits for the EVA. We now are entering the Ascension tracking station, during which time Skylab Flight Surgeon, Dr. Charles Ross will have the evening medical conference with the crew. At Greenwich mean time one hour 56 minutes, this is Skylab Control.

CC Skylab, Houston. We've got about 15 minutes left.

SPI Fifteen minutes?

CC Roger, we're picking up Canary and Madrid here contiguous.

SPT Woo woo. Okay, let's hear the late show.

CC Hey, I could give you a little run down on the power here you asked about just before LOS a while ago. The actions you're taking there are essentially cutting all the fans off and get all the lights in OWS, getting the wardroom water heaters off and the ATM C&D coolant loop off and one of the (garble) is POWER DOWN, and that totals out about 415 watts. Now, just prior to the EVA what we're going to do is command OFF the ATM experiment power and get regs three and 15 off which are not outputting anyhow, get your bat heater's off, power down experiment Pointing and the real biggy there is switch the ATM - thermal control system over to survival which saves us 466 watts. And all this comes up to 1100. And then the things that are required for your EVA - all your lights, SWS pumps, tape recorder, and converter, the primary coolant loop, and LSU power comes out to about 887 and then VTR is another 125 for a total of 1,012.

SPT Okay, we noticed that little note not to use the food heaters for lunch tomorrow. I'll have you know that we've only been using the food heaters for one food each day and that's the evening frozen the meal.

CC Roger, copy.

SL-11 MC-618/2

Time: 20:55 CDT, 14:01:55 GMT

6/6/73

SPT. Now, Henry, let me make sure that the way we're figuring on going tomorrow. And I don't know what happened to that message I told Rusty I'm missing. We're going to basically work from three books/pieces of paper. One of them being the EVA cue cards, another being the EVA checklist, and the third being that EVA procedure that was sent up here today and yesterday - part of it was in that stuff yesterday. So I assume that everything you're talking about is included in either checklist changes, cue card changes, or in that procedure, is that right?

CC

That's affirmative.

SPT

And I remember seeing that message, Rusty and I don't know how it was thrown out of (garble).

CDR

Hey, by the way, what are you planner types planning for the day after tomorrow so that we could get this spacecraft put back in the right shape. Don't forget we got tools and you know all that other Mickey Mouse sails are hanging around and man, there's junk all over everywhere, so it's not just the regular EVA post-operation. Copy that?

CC

Roger, we've got people looking at that, Pete, and they're - we hope to have a plan.

CDR

Okay, it is definitely going to take us - I think we ought to have a 12-man hour three hour each - no excuse me - nine manhour three hour each period in addition to the normal post EVA OPS to put this spacecraft back in shape because we've done torn it apart for the last two days.

CC

Roger, we concur.

END OF TAPE

SL-11 MC-619/1

Time: 21:04 CDT, 14:02:04 GMT
6/6/73

MCC

Henry?

MCC

Hey, CDR or troops up there. We'd

like to say just a word about the lighting related to the power here. If you get out there, especially if Joe gets up around the discone antenna in the evening there when its dark, and decides he does not need the docking lights, PJ could pull the breakers. There are two breakers, they knock out the two different lights that apply to that area, we could save power and would appreciate it if you don't need those lights, Joe, to let PJ turn them off.

PLT

Are the breakers labeled what, docking

light?

MCC

Stand by, I'll get the specific

label on the panel for you.

PLT

I got another question while you're

doing that. Remember, you said something about a reconfiguration of the STS panel tonight. I see that tomorrow night, but I don't see anything to do tonight yet.

MCC

Okay, we got that one. The circuit breakers for the docking light are on panel (garble).

PLT

Hello, Houston, you still there?

MCC

Roger.

PLT

Maybe I'm confused, I have here a

message for (garble) I got a message number for you. 1414, now is that to be performed tonight or tomorrow night?

MCC

Roger, that has to be done prior to

the EVA. That's the one I was talking about earlier, that if you could do, it's a real short one, you might do it tonight.

PLT

Oh, okay. You can't ask me tomorrow

Flight Plan, and I thought - I locked in right away on presleep plan tomorrow night. (Laughter)

MCC

Paul, the - we have two ways to turn

off the docking lights - there's a switch on 207 which turns them all off, or on 202 we got the circuit breakers which turn off half the lights, each of them. And I'll tell you right now which one turns off which lights.

SPT

He's en route to the MDA, Rusty, he'll call

you in a minute.

PLT

Okay, Rusty, I see the switch, the docking light switch above the caution warning. Where are the breakers, on what panel?

MCC

202.

PLT

Okay, which one?

MCC

Okay, it's next to the bottom row and it's

docking lights 1 and 2.

PLT

Oh, yeah, okay. I'm doing that power down, whatever it is. The three configurations now, Hank.

SL-II MC-619/2

Time: 21:04 CDT, 14:02:04 GMT

6/6/73

CC

Roger. Copy.

PLT

Okay, that made the AM batteries

6 and 7 start discharging (garbled)

CC

Roger, we're going to take those two BATS

off the line tonight to keep them up.

PLT

Okay.

END OF TAPE

SL-11 MC-620/1

Time: 21:10 CDT 14:02:10 GMT
6/6/73

CC Skylab, Houston. To fill you in a little more on the power thing, the reason that we're doing this REC adjust tonight is - the plan is that if we get into a bind and have to do the pitchup to 45 degrees for thermal reasons, that to handle the loads we're gonna bring the AM BATS on the line, and so we're all set up to do that and command it from the ground.

PLT

Okay.

SCHWEICKART And Skylab, Houston here, we - and as I mentioned earlier had not thought about the view out the STS window and if you can get a TV view out there, that would be appreciated. We can pick up the real-time over the states, which will be shortly after sunrise, and we'll give you a GO for use of a VTR if you want to try that also.

CDR

I have thought of physically putting the camera there, Rusty, but there's nothing behind your head, and you can see the whole dipole antenna to the base, below the base, and the A-Frame, all through that window, and I think you'll have excellent TV of Joe.

MCC

Yeah, I think that would be a - very educational here, a . . I think everyone would look forward to seeing it, if it's no sweat.

CDR

Okay, I went back up to look at the sail again. There is no doubt about it that the orange is beginning to fade. I would say that it's a nice orangy-frost-gold now, if that is a good description. And I think I can get the TV up there to where I can show you about a 6 inch strip about 3 inches wide of it. In full zoom, you might think about what that would do for color resolution. And we can work that one later.

MCC

Okay, fine. It just so happens I have in my very hand at the moment a couple of samples of the sail material here, which have been exposed to various thermal cycling, and let me ask you, with your description if you might take a gander at the stationary end of the LBNP for color comparison with what you just described to me.

CDR

I don't know. It's still much more oranger than that, Rusty. That's a flat gold and this has still got a lot of orange left in it, but it's - it looks faded. That's what it looks like.

MCC

Okay, fine, well it's between two of them that we got here in our hands right now. So that does give us some hack on it, thanks.

CDR

Okay, give us a little more advance warning if we're going to do a sail deployment, will you?

MCC

I keep trying to get some, but I'm not

SL-11 NC-620/2

Time: 21:10 CDT 14:02:10 GMT
6/6/73

having much luck.

CC Skylab, Houston. We're about 30 seconds from LOS. Be coming up on Guam at 40, and I do have some news if you've got time to listen to it there, if not we'll do it in the morning.

PAO This is Skylab Control. Greenwich mean time 2 hours and 15 minutes. The previous several passes had Commander Conrad, Science Pilot Kerwin, and Pilot Paul Weitz discussing preparations for tomorrow's EVA. Commander Conrad passed to the ground a suggestion that they use the TV camera tomorrow by placing it at one of the windows in the STS, the structural transition section, which is between the airlock module and the MDA, the multiple docking adaptor. There are four windows, 8 by 12 inches, oval windows spaced 90 degrees apart, on the outside of the STS. Commander Conrad said that by placing the camera in one of those windows, they might get a good picture of Science Pilot Joe Kerwin as he passes out the equipment for the EVA. At Greenwich mean time 2 hours and 17 minutes, this is Skylab Control, with next acquisition at - over the Guam Island tracking station in 23 minutes.

END OF TAPE

SL-11 MC-621/1

Time: 21:38 CDT, 14:02:38 GMT

6/6/73

PAO This is Skylab Control, Greenwich mean time two hours 38 minutes. We will have acquisition of the Skylab space station over the Guam Island tracking station momentarily. We'll hold the line up for conversations. Probably the last conversation with the crew tonight before they get the good-night call from Cap Com Hank Hartsfield.

CC Skylab, Houston through Guam for 10 minutes.

PLT Hi.

CC PLT?

PLT Yeah?

CC Yeah, hey, PJ let me tell you about one thing here that's come in late and just a warning for tomorrow. If you've got message 1326 around which is the second part of the EVA procedures that is the position where you're changing out the SOS2-A film?

PLT Well, we just happen to be there, talking it over. Let me - these message numbers don't really do anything for us, Rusty. We don't file them by message number. We gotta have a subject. Yeah, I see how I missed that other card I missed the - well anyway I made what I thought was most of the changes and threw that other message away. I missed changing the stowage compartment number though.

CC Okay, well the one I'm talking about now, then, Paul is general message EVA additional.

PLT I'm looking at it Rusty, go ahead.

SCHWEICKART Okay. Down there where - after the magazine is all replaced and you're up at panel 130 doing the film checks there, the verifications?

PLT Yeah.

SCHWEICKART Okay, we found out late here, unfortunately, that there may be a relay race logic problem which means that when you - okay you go down about three lines there and you're step and it says main power switch ON?

PLT I'm looking, wait a minute.

SCHWEICKART Okay, it's right after it says EV-3 and you reset the film counter and then it says XUV SPECT MAIN POWER switch ON and then it talks about the power doors.

PLT Yeah, okay I got it. (Garble) are you getting to handling these things? You know, I got a 16-foot message here and I'm trying to read from it. It's hard to find things sometimes. But I've found that place, go ahead.

SCHWEICKART Okay, the problem here is that the door is open - the outer door is open when you start this thing and if you just turn the main power ON then there - it's possible that the logic race will be such that you will not get a film decrement even though everything is okay. And the way to fix that up is just before main power switch ON, go ahead

SL-II MC-621/2

Time: 21:38 CDT, 14:02:38 GMT

6/6/73

and put the power door switch OFF and wait for the doors to close. In other words, wait about 20 seconds and then go right ahead with the main power switch ON et cetera.

PLT You're saying then that the power door's power to the doors is independent of on the main power switch position?

SCHWEICKART Yeah, the main power position will affect both doors, both the outer door, the thermal shield door and the inner door. If you have the main power switch OFF the inner door will remain closed but the thermal shield door will still open and close when you hit the POWER DOOR switch.

PLT Okay, so just ahead of main power switch ON you want me to say power doors OFF.

SCHWEICKART Right and then wait 20 seconds and then press on with it just as written.

PLT Okay.

SCHWEICKART And I hope - I'd like to promise you that that's the last change on anything we got here. And let me try that just before we go to bed here.

PLT Okay.

CC Skylab, Houston. I've got a few news items here. Are you too busy to listen or rather wait?

PLT No, take them up.

CC Okay, I'll start off by saying on this day in history, 1944 we landed in Normandy. President Nixon's made several new appointments this week. Former Defense Secretary, Melvin Laird has been made presidential counselor for domestic affairs. Laird said that he will form close ties with the heads of all the federal departments and agencies with members of Congress and with the President. He will have cabinet status and will be a member of the National Security Council. General Alexander Hague will retire from the Army to become Nixon's assistant in charge of the White House staff. Hague, as you recall, was former assistant to Henry Kissinger and has been acting as the White House Chief of Staff about one month. Kansas City Police Chief, C.M. Kelley is expected to become permanent Director of the FBI. Kelley's been in his present job since 61 and is considered an innovator of new police methods and techniques. Kelley was an FBI agent for more than 20 years. Ronald Zeigler, White House - -

END OF TAPE

SL-II MC-622/1

Time: 21:46 CDT, 14:02:46 GMT

6/6/73

CC Kelly has been in his present job since '61 and is considered an innovator of new police methods and techniques. Kelly was an FBI agent for more than 20 years. Ronald Zeigler, White House Press Secretary will become a presidential assistant for communications in addition to keeping his present duties.

MCC Okay, President Nixon will be near the Cape Kennedy area Friday when he delivers a commencement address at Florida Technological University. The new school was founded in 1968 and will be graduating about 700 students. Vice President Spiro Agnew spoke to U.S. Governors at the National Governor's Conference Wednesday at Stateline, Nevada. Agnew told the audience that he is "available for consultation, available for counseling."

MCC In Paris, Henry Kissinger resumed secret talks with Lee Duc Tho, solithuro member from Hanoi. The two representatives are seeking ways to halt continued violations of the cease-fire in Viet Nam. Congress was told by Deputy Defense Secretary, William Clements that the Pentagon will not order any more F-111 fighter bombers when the current production run ends late next year. The Air Force will have 543 of the aircraft by that time.

MCC The Senate Watergate hearings continue to be televised during the daytime hours. Wednesday's hearings featured Hugh Sloan, Jr., former Republican Campaign Treasurer. Sloan discussed the intricate business of receiving and handling huge sums of money during the election campaign. He also expressed his concern that the committee to re-elect the President might be involved in the Watergate affair, but said he was ignored by other officials. A bill has passed the House of Representatives to raise the minimum wage from a \$1.60 an hour to \$2.20 an hour next year. They will also extend coverage to six million more American workers, including household domestic workers. The bill now goes to the Senate.

CC I guess my wife's going to get a raise.

CC Wet weather in the mid-west caused by this Spring's heavy flooding has delayed Spring crop planting. Farmers and federal agricultural officials can't agree however, whether delay will mean higher prices for consumers. Bridgette Bardot announced that she will retire from film making. "I have had enough" she was quoted as saying. Some baseball scores from yesterday, National League - Philadelphia 4, Houston nothing. Dodgers 10, Chicago 1, Montreal 7, Atlanta 5, San Francisco 3, Pittsburg 2, Cincinnati 6, New York 5, Saint Louis 5 and San Diego 1. In the American League the scores were 7 to 4, 9 to 2, 9 to 6, 5 to 4, and 5 to 2.

PLT (Garble) report.

SCHWEICKART Good night Henry.

SL-11 MC-472/2

Time: 21:46 CDT, 14:02:46 GMT

1/6/75

CC
SCHWEICKART
PLT
CDR
CC

Goodnight Rusty.
Goodnight, Henry.
Good day you all.
Thank you, we appreciated that.
Skylab, Houston we're about 30 seconds

from LOS. We'll see you in the morning.

CDR Okay, Hank you might make sure you give
us a holler (garble) we're up by 11:00. What are the State's
passes (garble)? Have you got them?

CC You say you want a wake-up call in the
morning, Pete?

CDR Well, if you got one around" give us a holler.
Real good. We appreciate the good (garble) even though we have
been needing you. We'll give (garble)

CC And we just need to - one last message here
we need to INHIBIT the MOMENTUM DUMP on the next rev. We messed
up the (garble)

PAO This is Skylab Control, Greenwich mean
time two hours 51 minutes. The crew has closed out their
14th day in space as the Skylab space station passed over the
Guam tracking island - tracking station on rev 338. The crew
closed out the night by getting the daily news report from
Astronaut Rusty Schweickart and Hank Hartsfield. The daily
medical bulletin from Dr. Charles Ross, Skylab Flight Surgeon
is as follows: "The Skylab crew is in good physical condition
for tomorrow's EVA. The Science Pilot mentioned his complete
lack of symptoms while conducting vigorous head movements during
the M131 protocol and the fact that none of the crew has ever
experienced any motion sickness. The crew's day tomorrow
begins at 6:00 a.m. Houston time. The EVA preparations will
run for about 3-1/2 to 4 hours. EVA hatch opening is scheduled
for 10:37 a.m. central daylight time. A four-hour EVA is
planned to accomplish five - four different activities: de-
ployment of the orbital workshop solar array panel, pin-
ning back the S054 door in the Apollo telescope mount and
changing out the S082 film magazine. The crew will be wearing
Apollo-type suits during the extravehicular activity. The
crew will be attached to the vehicle by means of a 60-foot
long tether in which lines are provided to carry water, electri-
cal power and oxygen. During the EVA, Dr. Kerwin, and Com-
mander Conrad will be hard-suited while inside the vehicle
in a pressurized portion of the vehicle, Pilot Paul Weitz
will be soft-suited. He will not be wearing helmet or gloves
during this exercise. He'll be in the pressurized portion
of what is referred to as the structural transition section,
a portion between the multiple docking adapter and the air-
lock module. Pilot Weitz will monitor systems inside the STS,

SL-11 MC-522/3

Time: 21:46 CDT, 14:02:46 GMT

6/6/73

and will also read out procedures to the other two crew members as they perform the EVA. It's a possibility that the TV camera will be put up at one of the windows of the STS. There are four 8 by 12 inch oval windows spaced 90 degrees apart on the outside of the structural transition section, and it's possible to get - possible they may get a picture of Science Pilot Kerwin exiting the spacecraft. For early space-watchers in the Houston area, tomorrow morning at 5:39 a.m., Skylab space station will pass on a westerly, west to north path over Houston. It will be visible for four minutes and 14 seconds at an elevation of 15 degrees. At Greenwich mean time two hours and 55 minutes, this is Skylab Control.

END OF TAPE

SL-II MC-623/1

Time: 22:05 CDT 14:03:05 GMT

6/6/73

PAO This is Skylab Control, Greenwich mean time 3 hours 5 minutes as the spacecraft is on it's 338th revolution of the Earth going over the South Pacific. The crew has been bid good night for the evening by CAPCOM Hank Hartsfield and Astronaut Rusty Schweickart. The crew will arise at 6 a.m. Houston time, Central Daylight time to begin a big day of extravehicular activities. At 3 hours 6 minutes Greenwich mean time this concludes the report from the mission control center. The next report will be Thursday morning at 6 a.m. Central Daylight time. This is Skylab Control, Greenwich mean time 3 hours, 6 minutes.

END OF TAPE